



IRONSIDE

Grazing Management Environmental Impact Statement



Oregon State Office



SF
85.35
.07
176
1981

BUREAU OF LAND MANAGEMENT

Library
Denver Service Center



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

OREGON STATE OFFICE
P.O. Box 2965 (729 N.E. Oregon Street)
Portland, Oregon 97208

BLM Library
D-562A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

SF
85.35

.07
I76
1981

The Final Ironside Grazing Management Environmental Impact Statement (EIS) differs from past EIS format which consisted of a reprint of the draft statement, incorporating changes resulting from public review. This final EIS consists only of the comments and responses to the draft EIS, and errata for the necessary changes in the text. The economics sections of Chapters 2 and 3 are included in their entirety because of major changes. This revised procedure has saved substantial time and money. Therefore, this final EIS must be used in conjunction with the earlier draft statement which was distributed to the public in April 1980.

This environmental impact statement is not the decision document. If you wish to comment on the proposed action or any alternative of this EIS, for the District Managers' consideration in development of their proposed decisions, please submit your comments to me by the end of October 1980.

The Management Framework Plan decisions on the action to be taken will be based on the analysis contained in the EIS, additional data available by the winter of 1980-81, public opinion, management feasibility and policy and legal constraints. The decisionmaking process that follows publication of this final EIS will culminate in issuance of a Rangeland Management Program Decision Document in the spring of 1981. A draft of that document, including a proposed decision, will be distributed for public review and comment early in 1981. A 45-day comment period will be provided and public meetings will be held prior to making the final program decision.

After announcement of the final program decision, allotment management plans will be developed through consultation and coordination with the permittees. Rancher consultation on individual allotments will continue until late summer of 1981. Decisions on forage allocations to individual permittees will be made at the end of that summer, to be effective starting in the 1982 grazing year.

Thank you for your interest in this environmental impact statement.


William G. Leavell
Oregon State Director

MEMORANDUM
TO: SAC, Boston
FROM: SAC, New York
SUBJECT: [REDACTED]
RE: [REDACTED]

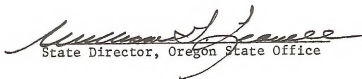
IRON
.75
FES

DEPARTMENT OF THE INTERIOR
FINAL
ENVIRONMENTAL IMPACT STATEMENT

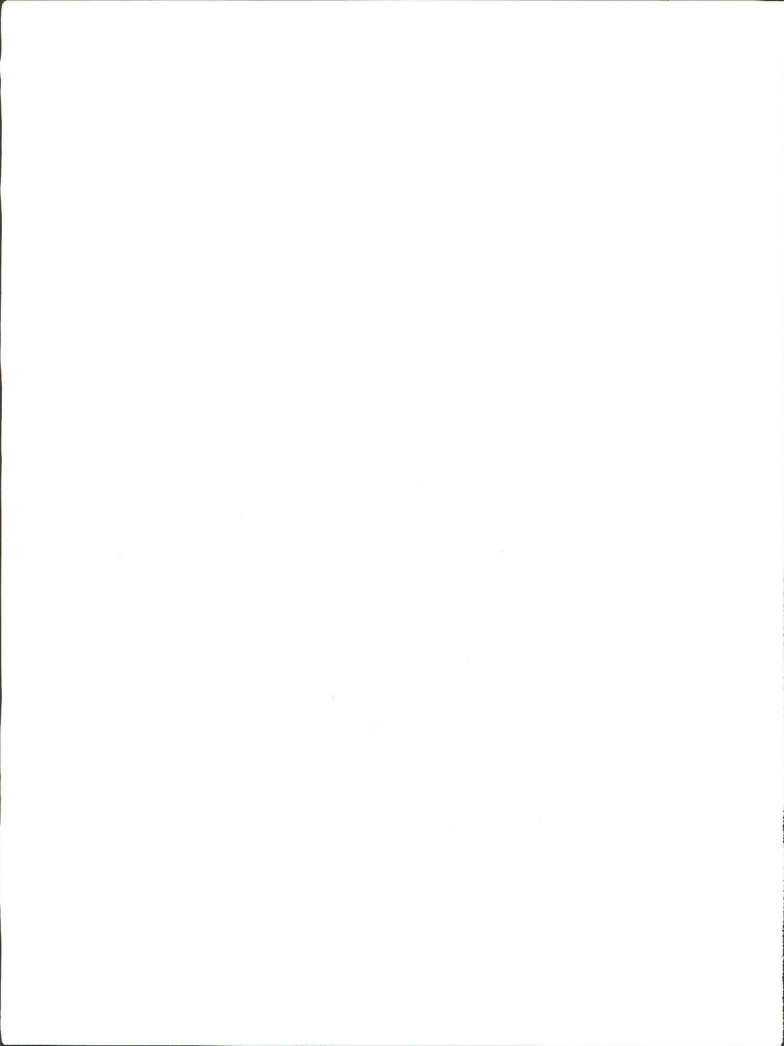
IRONSIDE GRAZING MANAGEMENT PROGRAM

Prepared by

BUREAU OF LAND MANAGEMENT
DEPARTMENT OF THE INTERIOR


State Director, Oregon State Office

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center



IRONSIDE PROPOSED GRAZING MANAGEMENT

Draft () Final (x) Environmental Impact Statement

Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative (x) Legislative ()

2. Abstract: The Bureau of Land Management proposes to implement livestock grazing management on 1,001,964 acres of public land in eastern Oregon. Intensive grazing management is proposed on 914,005 acres (172 allotments), nonintensive management on 71,131 acres (167 allotments), unallotted status on 14,219 acres and elimination of livestock grazing on 2,609 acres (1 allotment). Implementation of the proposed action includes allocation of vegetation to livestock, wild horses, wildlife and nonconsumptive uses; establishment of grazing systems; and construction of range improvements. Vegetation condition would improve and forage production would increase. Overall watershed conditions would improve. Certain wildlife habitat would improve, and the numbers of upland game birds, nongame animals and fish would increase. There would be an initial decrease of 38,437 animal unit months (AUMs) in 151 allotments and an increase of 3,339 AUMs in 51 allotments for a net decrease of 25 percent. In the short term, 39 permittees would have losses exceeding 10 percent of their annual forage requirements under the proposed action. Direct and indirect community personal income due to grazing would be reduced by approximately \$358,000 annually in the short term and increase by approximately \$17,000 over existing conditions in the long term. Employment in construction of range improvements during the first 5 years would offset the reduction by \$280,000.

3. Alternatives Analyzed:

- a. No Action
- b. Eliminate Livestock Grazing
- c. Limit Downward Adjustments
- d. Optimize Livestock Grazing
- e. Optimize Wildlife, Wild Horses and Nonconsumptive Uses

4. Draft statement filed with EPA and made available to the Public April 28, 1980.



TABLE OF CONTENTS

| | page |
|---|------|
| <u>SUMMARY</u> | vii |
| <u>COORDINATION AND CONSULTATION</u> | C-1 |
| Response to Written Comments..... | C-2 |
| Response to Hearing Comments..... | C-83 |
| <u>ERRATA</u> | E-1 |
| Chapter 2 Socioeconomic Conditions..... | E-7 |
| Chapter 3 Impacts on Economic Conditions..... | E-17 |
| List of Preparers..... | E-30 |
| References Cited..... | E-31 |



SUMMARY

This environmental impact statement (EIS) describes and analyzes the environmental impacts of implementing a livestock grazing management program in a portion of the Baker and Vale Districts in eastern Oregon. The proposed action, the result of the Bureau planning system and public input, is the preferred alternative. Five other alternatives are also described and analyzed for environmental impacts.

The proposed action consists of vegetation allocation and implementation of intensive grazing management on 172 allotments covering 914,005 acres of public land, nonintensive management on 167 allotments covering 71,131 acres, continued unallotted status (no authorized livestock grazing) on 14,219 acres and elimination of livestock grazing on 2,609 acres.

The purpose of the proposed action is to implement planning decisions needed for management, protection and enhancement of the rangeland resources. The time frame involved would be 5 years for implementation and 10 additional years to assess impacts. The proposal would thus cover a 15-year period from the time actions are initiated.

The existing forage production of 127,216 AUMs would be allocated to livestock (107,020 AUMs), wildlife (7,619 AUMs), wild horses (600 AUMs) and nonconsumptive uses (11,977 AUMs). The allocation to livestock constitutes a 25 percent reduction from the 1978 authorized livestock use of 142,118 AUMs.

Livestock grazing would be reduced initially by 38,437 AUMs in 151 allotments. These reductions range from 1 to 3,264 AUMs by individual allotment.

Livestock grazing would be increased by 3,339 AUMs in 51 allotments. These increases range from 1 to 999 AUMs by individual allotment.

Spring grazing would be implemented on 36,762 acres, spring/summer grazing on 56,051 acres, spring/fall grazing on 54,389 acres, deferred rotation grazing on 361,694 acres, and rest rotation grazing on 380,828 acres.

Proposed range improvements include 74 reservoirs, 82 springs, 5 wells, 91 miles of pipeline, 245.7 miles of fence and 11 guzzlers. Proposed vegetative manipulations include brush control on 39,716 acres and preparation for seeding on 18,535 acres, primarily by spraying 2,4-D herbicide; seeding 24,593 acres; and juniper control on 520 acres by hand falling with chain saws.

Five alternatives to the proposed action were considered:

1. No Action - Under this alternative, there would be no change from present management conditions. No additional range improvement projects or grazing systems would be undertaken.

2. Eliminate Livestock Grazing - This alternative would eliminate all authorized livestock grazing from all public lands except trailing use. No range improvements would be constructed.

3. Limit Downward Adjustments - This alternative would limit initial downward adjustments in livestock use to 20 percent of active qualifications or one-third of the adjustment identified in the proposed action, whichever is greater. Reductions would be phased over 5 years. Range improvements would be implemented throughout the 5-year period with grazing systems implemented as promptly as conditions permit. Additional reductions, not to exceed the total amount in the proposed action, would be imposed if resource objectives were not being met.

4. Optimize Livestock Grazing - This alternative would initially provide an additional 14,425 AUMs above the proposed action by allocating less forage to wildlife, wild horses and nonconsumptive uses. An additional 10,191 AUMs would result from implementation of the range improvements in the proposed action and the following additional improvements: 26,292 acres seeding, 53,429 acres brush control, 2,850 acres juniper control, 345 miles of fence, 0.5 miles of pipeline, 1 spring and 6 guzzlers.

5. Optimize Wildlife, Wild Horses and Nonconsumptive Uses - This alternative would result in 32,054 AUMs less for livestock than the proposed action by allowing a maximum of 196 wild horses, allocating forage to support the highest historic big game populations, limiting grazing systems to 40 percent utilization of key species and constructing 700 miles of fence to exclude livestock from riparian areas. No other range improvements would be constructed.

During the planning phase of the EIS, public input identified a major area of controversy over planned reductions in livestock use based on RLM's suitability requirements. No AUMs were allocated to cattle on areas with slopes greater than 50 percent, which accounted for major reductions on several allotments. As a result of public input, Alternative 4 includes encouraging sheep use on steep-sloped pastures, for an initial increase of 6,909 AUMs above the proposed action.

Environmental Consequences

Vegetation

The vegetation allocation, grazing systems and range improvements under the proposed action and Alternatives 3 and 4 would increase forage production and residual ground cover, and improve ecosite condition. The 40 percent utilization of key species under Alternative 5 and no grazing under Alternative 2 would also lead to increases in forage production, ground cover and ecosite condition. Overgrazing in Alternative 1 would lead to decreases in these vegetative characteristics. Fencing riparian vegetation under the proposed action and Alternatives 3 and 5, and elimination of grazing under Alternative

2 would improve the condition of some riparian vegetation. The implementation of grazing systems would also improve some riparian vegetation under the proposed action and Alternative 3 and 4, but to a lesser extent than no grazing. Overgrazing in Alternative 1 would cause deterioration of riparian vegetation.

| | Proposed Action and Alt. 3 | Alt. 1 | Alt. 2 | Alt. 4 | Alt. 5 |
|----------------------------------|-------------------------------|-----------|-----------|---------|---------|
| Ecosite Condition | | | | | |
| Climax | 76,323 | 32,026 | 167,266 | 75,994 | 64,147 |
| Late | 278,371 | 137,467 | 266,556 | 360,749 | 206,443 |
| Middle | 299,987 | 254,036 | 362,486 | 299,891 | 296,440 |
| Early | 126,377 | 357,529 | 20,750 | 44,424 | 214,028 |
| Residual Ground Cover | | | | | |
| Ac. Increasing | 667,663 | 0 | 1,000,423 | 667,663 | 851,145 |
| Ac. Static | 49,474 | 1,000,423 | 0 | 49,474 | 2,556 |
| Ac. Decreasing | 197,044 | 0 | 0 | 197,044 | 43,953 |
| Vegetation Production AUMs | 163,548 | 123,850 | 203,780 | 173,739 | 145,600 |
| Riparian Vege- tation Trend | | | | | |
| Ac. Improving | 402 | 116 | 1,541 | 109 | 1,497 |
| Ac. Static | 907 | 1,015 | 0 | 1,248 | 0 |
| Ac. Declining | 114 | 317 | 0 | 108 | 0 |

Soils

The increase in residual ground cover would reduce soil erosion under the proposed action and Alternatives 2, 3, 4 and 5. Overgrazing under Alternative 1 would reduce ground cover and thus increase erosion. Elimination of livestock grazing under Alternative 2 and fencing of riparian areas under Alternative 5 would decrease streambank erosion on 336 stream miles. Implementing the spring grazing system and fencing riparian areas would decrease streambank erosion on 53 stream miles under the proposed action and Alternative 3, on 26 miles with Alternative 4 and on 22 miles under Alternative 1.

Water

Construction of range improvements would cause short-term increases in sediment yield of less than 1 percent under the proposed action and

Alternatives 3 and 4. In the long term, the increase in residual ground cover would reduce sediment yield by 92.3 acre-feet per year (ac-ft/yr) under the proposed action and Alternatives 3 and 4, by 250.4 ac-ft/yr under Alternative 5, and by 487.6 ac-ft/yr under Alternative 2. Overgrazing under Alternative 1 would lead to an increase in sediment yield of 52.6 ac-ft/yr. Runoff would remain the same under Alternative 1, and would decrease by 5,890 ac-ft/yr with the proposed action and Alternatives 3 and 4, by 9,635 ac-ft/yr with Alternative 5, and by 19,270 ac-ft/yr under Alternative 2.

Wildlife

There would be no substantial impacts to big game under the proposed action and Alternatives 1 and 3. Long term vegetation stagnation under Alternative 2 would reduce forage available to deer and elk. Forage competition between deer and livestock for the fall "green up" would occur on approximately 5,000 acres each year under deferred rotation and rest rotation in the proposed action and Alternatives 3 and 4. The 700 miles of fence to be built along riparian areas in Alternative 5 would increase deer mortalities. Increases in residual ground cover would benefit upland game birds, other birds, other mammals, reptiles and amphibians under the proposed action and Alternatives 2, 3 and 5. Decreases in cover from overgrazing in Alternative 1 and vegetative manipulation in Alternative 4 would decrease habitat for these animals. Increases in bank stability and riparian vegetation under the proposed action and Alternatives 2, 3 and 5 would improve fish habitat. Bank stability and riparian vegetation would decline under Alternatives 1 and 4, thus decreasing fish habitat.

Recreation

Total recreational use would increase by 208,060 visits per year under the proposed action and Alternative 3, by 253,490 visits per year under Alternative 2, by 224,700 visits per year under Alternative 5 and by 132,660 visits per year under Alternative 1. Under Alternative 4, total recreational use would increase by 71,140 visits per year but hunting visitor use would not increase significantly due to the loss of deer cover from vegetative manipulation.

Cultural Resources

The grazing systems and range improvements in the proposed action and Alternatives 3, 4 and 5 could disturb unidentified cultural sites and the integrity of known sites.

Visual Resources

The grazing systems and range improvements would create visual contrasts under the proposed action and Alternatives 3 and 4, but in the long term, esthetics would improve as range condition improves. Overgrazing under Alternative 1 would decrease the value of visual resources. The elimination

of grazing under Alternative 2 would improve visual quality. Alternative 5 would improve visual quality in the same manner as the proposed action but to a greater extent.

Wild Horses

The construction of range improvements under the proposed action and Alternative 3 would cause a short-term disturbance to the horses. Wild horses would be eliminated under Alternative 4, would be allowed to increase to a maximum of 196 head under Alternative 5, and would be maintained at a level of 30 to 50 head under the proposed action and Alternatives 1, 2 and 3.

Ecologically Significant Areas

The construction of range improvements under the proposed action and Alternatives 3 and 4 would decrease ecologically significant values by destroying sage grouse habitat in one site (BA-31:Unnamed).

Energy Use

Fossil fuel energy would be consumed during the construction of range improvements and maintenance of proposed and existing projects.

Socioeconomics

In the short term, 39 permittees would have losses exceeding 10 percent of their annual forage requirements under the proposed action. These permittees, 14 percent of the total, would lose an average 520 AUMs per permittee, causing an average direct personal income loss to each permittee and their employees of about \$3,000.

The average reduction in return above cash cost would be 10 to 20 percent of normal depreciation.

Due to the proposed reductions in livestock grazing, local personal income would be reduced by approximately \$358,000 annually. Compensating increases due to construction projects would result in a net reduction in local personal income of \$78,000 annually. Short-term adverse impacts to local personal income for Alternative 2 would be about four times the magnitude of the proposed action, Alternative 5, two times, and Alternatives 1, 3 and 4 would be about half.

Long-term impacts on personal income for the proposed action would be positive after the expected improvement of range conditions. The increase over existing conditions would amount to \$20,000 (\$17,000 due to improved grazing and \$3,000 due to potential increases in hunting and fishing opportunities). Alternative 4 would result in approximately \$74,000 increase in local personal income and Alternative 5 a \$668,000 decrease, as compared to existing conditions.



CONSULTATION AND COORDINATION ON THE DRAFT ENVIRONMENTAL
IMPACT STATEMENT

The Draft Ironside Grazing Management Environmental Impact Statement (Interior DEIS 80-26) was filed with Environmental Protection Agency and released to the public on April 28, 1980 and open to comment until June 27, 1980.

Public hearings on the draft were held June 3, 1980 in Ontario, Oregon and June 4, 1980 in Baker, Oregon. Oral testimony was presented by 8 people in Ontario and 18 in Baker. A total of 26 letters were received.

All letters and hearing testimony were reviewed and considered. Comments which raised questions or issues bearing directly upon the environmental effects of the proposed action, presented new data, or questioned facts and/or analyses, are responded to separately. Comments identifying errors or omissions are also included. See the Errata pages E-1 to E-6, which responds to these comments. Also in response to comments, the economic sections of Chapters 2 and 3 of the DEIS have been revised in an attempt to provide greater clarity (Errata, pages E-7 to E-29).

All letters have been reproduced in this final, with each substantive comment identified and numbered. BLM responses immediately follow each of the letters. Substantive comments identified in the oral testimony at the hearings have been excerpted and/or paraphrased for clarity and included along with BLM's response. These comments are also indexed and appear in the Response to Hearing Comments section.

Some persons both testified orally and submitted written comments, resulting in duplication of comments. These comments are responded to in Response to Written Comments.

In most cases, only comments pertaining to the adequacy of the DEIS--i.e., the analysis as distinct from the actions analyzed--are formally responded to in this document. However, all comments (oral and written), and any new information will be taken into account when the final decision regarding rangeland management is made in each of the two districts.

Copies of all written comments (including material appended to Letter 6 and 12) and the hearing transcripts are available for public review at the State Director's Office, Bureau of Land Management, 729 N.E. Oregon Street, Portland, Oregon, and at the Baker and Vale District Offices

Response to Written Comments

Each person, organization or agency that provided written submissions was assigned an index number.

| <u>Letter Number</u> | <u>Agency, Organization or Individual</u> |
|----------------------|--|
| 1. | USDI, Bureau of Mines |
| 2. | Wild Horse Organized Assistance |
| 3. | USDI, Geological Survey |
| 4. | Richard J. Mangan |
| 5. | Roger W. Corrigall |
| 6. | Advisory Council on Historic Preservation |
| 7. | USDI, National Park Service |
| 8. | Oregon State University, Rangeland Resources Program |
| 9. | Society for Range Management |
| 10. | U.S. Bancorp, Dennis E. Goodman |
| 11. | Oregon, Intergovernmental Relations (A-95 Clearinghouse). State Historic Preservation Officer |
| 12. | Defenders of Wildlife |
| 13. | Harry L. Smith |
| 14. | Kent Coe |
| 15. | Petition, five signatures |
| 16. | Oregon Department of Fish and Wildlife |
| 17. | U.S. Environmental Protection Agency, Region X |
| 18. | Charles A. Holtz |
| 19. | Baker Production Credit Association |
| 20. | Petition, 19 signatures |
| 21. | Oregon Environmental Council |
| 22. | Intermountain Realty |
| 23. | Baker County Chamber of Commerce |
| 24. | Al Steninger |
| 25. | Del Blackburn |
| 26. | USDI, Fish and Wildlife Service |



United States Department of the Interior

BUREAU OF MINES

EAST 315 MONTGOMERY AVENUE
SPOKANE, WASHINGTON 99207

May 8, 1980

Response to comments in Letter 1

1-1 Pages 2-1 and 3-1 in the DEIS both state that prior analysis indicated that the minerals resource would not be affected by the proposed action or alternatives. Impacts are not expected on accessibility and development of mineral occurrences.

Memorandum

To: Frank A. Edwards, Acting State Director, Bureau of Land Management, Portland, Oregon

From: Chief, Western Field Operations Center

Subject: Draft of Ironside Grazing Management Environmental Impact Statement (DEIS), Baker and Malheur Counties, Oregon

Mineral-related activities and mineral deposits in the study area appear to have been ignored. The only exceptions are two or three mines mentioned as historical sites. Prospecting and mining were significant parts of the local culture and important contributors to the local economy prior to World War II. And, if the price of gold remains high, they might regain some of that importance. Also, because of technologic changes and the increased strategic significance of many other mineral commodities, gold should not be the only resource of potential interest to be considered in the DEIS.

Our MILS (Mineral Industry Location System) data indicates a great number of mines, prospects, and mineral occurrences in the general study area; however, the draft has no mention of their presence. A reader could presume this means the proposed actions will not impact upon mineral property accessibility or development. We suggest that the DEIS acknowledge the presence of mines, prospects, and mineral occurrences, and clarify how the proposed actions may impact upon their accessibility or development.

Please regard the preceding comments as technical assistance only, rather than an official Bureau of Mines review. We would appreciate receiving a copy of the final statement when it is available.

R. N. Appling, Jr.
for R. N. Appling, Jr.

Eastern Representative, Wild Horse Organized Assistance

Kathryn Cushman
Box 26
Canterbury, New Hampshire 03224
May 27, 1980

Oregon State Director (911.1)
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Edwards:

This report will address the proposals affecting wild and free-roaming horses in the Ironside Grazing Management Environmental Impact Statement area. This area is limited to Allotment #203, Baker District, southwest of Harper. Five Proposals are presented.

Alternatives #1 and #2 do not even merit comment. #3 and particularly #4 would weight land use percentages even more heavily toward livestock use of public lands. Alternative #3 would also cause disruption in the herd area. Establishing reservoirs under #3 would draw down the water table in the surrounding area. The reservoirs would have to be available year round to be of any practical use to the horse herd.

Proposal #5 is the best of the five presented. Of the total AUM's listed in the summary--127,216, livestock is allocated 84%, wildlife 5%, non-consumptive 5% and horses only .47%. Proposal #5 provides a fairer balance of the users and at the same time allows for continuing use by livestock users. It will take a number of years for the present herd of 63 horses to increase to 196, particularly when considering natural mortality, natality, and loss due to severe weather conditions. Livestock presently using the three pastures that will be eventually phased out for livestock grazing could therefore continue to be used, phasing out livestock grazing slowly as the horse herd increases. This approach would prevent any sudden financial loss to ranchers utilizing that area. The allotment is mostly grassland and is fairly static so would support both horses and cattle as the horse herd grows in size.

It is necessary to maintain a horse herd of some size, i.e. 196 for a number of reasons. The wild horse herd occupies only a small area of the Baker District. There are none in the Vale District. A herd of 196 is better able to survive and remain viable during periods of drought or other severe weather stress. In the Kanab/Sacramento district in Utah, a herd of 35 was reduced to 17 as a result of winter loss, a 50% reduction in one year. The Wild Free-Roaming Horse and Burro Act as amended by the Public Rangelands Improvement Act of 1978 states: Wild free-roaming horses and burros where found on public lands shall

be considered comparably with other resource values in the development of resource management plans under the Bureau's planning system including allocation of appropriate portions of the available forage. (Emphasis added.). Allowing the horse herd to increase to 196 is equivalent to 2,360 AUM's or 1.8% of available AUM's, a more appropriate allocation of forage than .47%.

Range improvements are all proposed in relation to livestock use, any benefit to horses is incidental. Multiple use is mandated by law and must be considered in conjunction with range improvements. If new sources of water are made available, they must be available year round, not only when livestock use the range.

Proposal #5 requires 700 miles of fencing (at \$2300 per mile in these austere times?). The fencing is for riparian areas. It is odd that this phenomenal expense is included only in proposal #5, the only alternative that is reasonable in regard to the wild horses. Why is it not included in alternative #4 which optimizes livestock grazing, only 345 miles of fence is proposed in #4? An expense of \$1.6 million dollars for fence would tend to eliminate proposal #5 if one did not look into other beneficial aspects of the proposal. The 700 miles of fencing should be decreased and any fence that is erected must not disturb the habits of the wild horse herd.

Thank you for the opportunity to comment on the Draft Ironside Grazing Management Environmental Impact Statement. I am a representative for Wild Horse Organized Assistance (Box 555, Reno, Nevada 89504) and submit this comment for that organization. Please add my name to your mailing list.

Sincerely,

Kathryn Cushman
Kathryn Cushman
WFOA Representative

C-5

Response to comments in Letter 2

- 2-1 Two reservoirs would be constructed in the herd management area under the proposed action and Alternative 3. These reservoirs are not expected to draw down the water table, as they fill during the spring runoff period. The reservoirs would be available to horses year-round.
- 2-2 The Hog Creek herd, which is located in the Vale District, had 18 horses in 1972, 63 in 1978, and 130 in 1980, indicating the herd is viable. Although this herd is the only one in the EIS area, there are seven other herds in the Vale District that will be discussed in a future EIS.
- 2-3 The 700 miles of fencing to be constructed under Alternative 5 (Optimize Wildlife, Wild Horses and Nonconsumptive Uses) is proposed to improve wildlife habitat in riparian zones and reduce streambank erosion and sedimentation in streams. By not excluding livestock from these riparian zones, Alternative 4 (Optimize Livestock Grazing) would make an additional 905 AUMs available for livestock grazing. The final decision can be made from any combination of levels of grazing use and/or number of range improvements within the range of alternatives analyzed.
- Of the 700 miles of riparian fencing proposed under Alternative 5, approximately 9.5 miles are in the herd management area. If constructed, these fences may cause injuries to horses until they become accustomed to the fence locations. Water gaps would be constructed so the horses would be able to drink from the streams.



United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

MAY 27 1980

Memorandum

To: State Director, Bureau of Land Management
Portland, Oregon

Through: Assistant Secretary--Energy and Minerals *[Signature]* MAY 30 1980

From: Director, Geological Survey

Subject: Review of draft environmental statement for Ironside grazing management program; Baker, Malheur, Grant and Harvey Counties, Oregon

We have reviewed the draft statement as requested in your letter of April 1.

Specific Comment

Page 2-17, Water Quality.

- 3-1 The statement should address the occurrence of arsenic in the ground water of some of the aquifers at concentrations considerably above the 0.05-mg/l level recommended as a maximum by the Environmental Protection Agency. (See Collins, C. A., 1979, Ground-water data in the Baker County-Northern Malheur County Area, Oregon: U.S. Geological Survey Open-File Report 79-695, p. 26 through 28.) The statement should address plans to mitigate any possible impact on the human environment, for example, by analysis of waters, selective use, and posted warnings, where appropriate, or by selection of aquifers with safe levels of arsenic concentration.

[Signature]
for H. William Menard

Response to comments in Letter 3

- 3-1 of the wells sampled by Collins (1979), five have arsenic levels higher than 0.05 mg/l. All five are located in the southeast portion of the EIS area. Two wells (in Allotments 101 and 201) are proposed in this area. The water from these wells would be piped into the bottom of stock water troughs, with no fresh water accessible for human consumption.

Baker, Oregon
June 9, 1980

Oregon State Director,
Bureau of Land Management
P.O. Box 2926
Portland, OR 97203

Dear Sirs:

Thank you for the opportunity to comment on the Ironside Grazing Management Draft EIS.

The plan is generally well prepared, but seems to seriously underplay the role that prescribed fire can play in grazing management. Grasslands have coexisted with fire throughout time and fires are an inevitable part of these systems; a plan to consciously manage more than one million acres of grasslands must acknowledge this role.

4-1 The statement is made on page 1-25 that no more than 25 percent of the range improvement project area would be by burning. What is the rationale behind the assigning of this percentage? I can find no discussion of the benefits or drawbacks of prescribed fire use, and feel that by arbitrarily limiting its use you may be missing some cost effective management opportunities.

4-2 What were the decision making guidelines that led to the selection of proposed range improvement projects on specific allotments shown on Table 1-7? In reviewing Appendix "D" (Existing Condition and Trend) there appears to be many allotments currently in the early or middle ecocline condition with a static or downward trend that would be likely candidates for range improvement work.

Table 2-2 shows 459,491 acres in the early or middle stages of ecocline condition just in the grass ecoclines. Of those acres, 17 percent is on an upward trend and 85 percent is either static or on a downward trend. If these more than 450,000 acres were moved into the climax or late ecocline condition, perhaps more A.U.D.'s could be carried than is now presently planned. Fire can move the ecoclines toward these stages by reducing or eliminating the brush species and increasing the desirable grasses and forbs.

The extensive use of fire as a range management tool can significantly increase the growth of grassland vegetation. Post-burn plants not only grow larger and more vigorously, but tend to produce more flowers and seeds and contain more protein, carbohydrates, and moisture than unburned plants. Grasses produce larger numbers of grass stems per plant and more plants per area.

Post burn plants are preferred by herbivores, who seek out burn sites and select the more palatable and nutritious forage. Animals grazing burned grasslands usually gain weight more rapidly. The fires generally promote grasses at the expense of woody species. Woody plants have difficulty invading established grasslands, particularly if the grasslands are healthy and subject to recurring fires. Fire injures or kills most woody plant tops while generally leaving the living portion of grassland species undamaged.

Repeated burning in native grassland communities generally does not reduce the species diversity and may even increase it by promoting the growth of additional grasses, legumes, and other species. Vegetative reproduction, stimulated by fire, gives grassland species competitive advantage in increased survivorship.

You state on page 3-2 that it is assumed that available nutrients are essentially fully utilized by the present vegetation. The nutrient status of the soil is altered somewhat by prescribed fire, at least initially. Nitrogen and sulphur are volatilized, and may be lost to the system. Nitrogen lost through volatilization is more than replaced, and rather rapidly, by the increased activity of nitrifying bacteria stimulated by increased nutrients made available through burning. Although total nitrogen may be reduced by burning, nitrogen mineralization is greatly increased; consequently more nitrogen is available for plant growth for at least the first few years. Other nutrients are changed to water soluble salts immediately available for plant growth; although soil pH may undergo a slight rise following burning, the rise is usually temporary and probably does not appreciably affect nutrient availability. Burning does not appreciably reduce the amount P, K, Ca, Mg, and micro nutrients.

The effects of fire on specific plant species concerning the Ironside Management Unit is well documented:

Big sagebrush, a non-sprouter, is highly susceptible to fire kill; it can, however, reseed an area in the absence of the regularly scheduled burning program.

Cheatgrass can be reduced, depending upon the intensity of the burn, if the seed is destroyed; in eastern Washington, burns have destroyed from 80-99 percent of the germinable cheatgrass seed. Early summer burns, however, favor annuals over perennials;

Bluebunch wheatgrass is slightly affected by burning, with a two-fold increase after twelve years over unburned control plots. This is one of dominant climax species shown in Table 2-2;

Bottlebrush squirreltail responds well to fire, increasing dramatically in the first 5-6 years after fire treatment.

It appears then, that the use of prescribed fire has the potential of advancing the ecosite condition on more than 490,000 acres to meet the stated objective of increasing long-term vegetation allocation to livestock from 107,000 to 143,000 A.U.M.'s. I strongly recommend that your final E.I.S. address the substantial benefits to be realized through a large scale range burning program, and that such a program be implemented on the Ironside Management Area.

Sincerely,

RICHARD J. MANGAR

Responses to comments in Letter 4

4-1 The percentages of the brush control methods were estimates made for analysis purposes. See errata for page 1-25. The estimates were based mainly on the costs and feasibility of each method and may change after on-the-ground analysis on each project is done. The impacts of the three proposed methods of brush control on the various resources are discussed throughout Chapter 3 Environmental Consequences in the DEIS.

4-2 Range improvements were proposed on the various allotments for any of several reasons:

1. to improve the existing ecosite condition or trend
2. to improve livestock distribution in an allotment
3. to increase forage production
4. to allow for the initiation of grazing systems

Site potential and project feasibility were also considered.

Of the 172 allotments proposed for intensive management, less than 50 which have no range improvements proposed are mostly in middle or early ecosite condition. No range improvements are proposed in these allotments due to a variety of reasons: they have low potential for range improvements; resource values other than forage production apply, such as historic values along the Oregon Trail and important wildlife habitat (curlew nesting areas, deer winter range); they are combined within other allotments in a grazing system; or all feasible improvements have already been developed.

Of the 92 allotments proposed for nonintensive management which have ecosite condition data (as shown in Appendix D), 66 are mostly in middle or early ecosite condition. No range improvements are presently proposed for the nonintensive allotments (see page 1-26 in the DEIS).

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

June 10, 1980

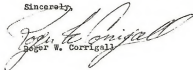
Dear Mr. Director:

I am writing this letter to respond to your proposed, or draft Ironside grazing management environmental impact statement. My comments are based on (1) experience gained from a career with the BLM extending from 1969 to March 1980 (I resigned as a GS 11 Supervisory Range Conservationist), and 2) I was raised on the ranch my wife and I are presently buying from my mother and father, Mr. & Mrs. James W. Corrigan.

In general, I feel the aforementioned statement is a poorly written document, which is difficult to read and is based on; (1) a questionable inventory procedure used to gather resource data, and (2) unqualified assumptions and opinions.

My comments are attached. My comments are directed towards the proposed action or chapter 1. I did not comment on the affected environment as there is so much controversy and conflicting literature regarding this subject I felt it would be time poorly spent.

Sincerely,


Roger W. Corrigan

Comments from Roger Corrigan concerning the Ironside grazing management environmental impact statement.

1. Page XV - Summary, riparian vegetation table

The effects of grazing and of various grazing systems on riparian vegetation are not fully understood due to the lack of long term research. Therefore, I do not believe it possible to even make a good guess at the acreage supporting riparian vegetation which will improve, remain static or decline under each alternative.

2. Page XVII - Summary, Socioeconomics

I do not understand how a loss of 520 AUMS per permittee would cause only an average direct personal income loss to each permittee and their employees of about \$3,000.00. -- A loss of 520 AUMS would represent a loss of about 75 head (if the permittee had a seven month grazing permit). This would result in a loss of about 60 calves at an 80% calf crop, which would represent a loss of income to the permittee of about \$12,000.00, if the selling price was \$0.50/lb. and the calves averaged 400 pounds.

The above example causes me to wonder if the entire socioeconomic section is erroneous.

Positive long term impacts on personal income may or may not be realized; because, the expected range improvement is only an assumption and should be clearly identified as such.

3. Page 1-4, Allotment No. 218

It is my opinion that an April 1, turnout date, as proposed, is too early for this allotment. I believe the existing April 16 date is more appropriate.

Although the allotment seemed to be slowly improving prior to 1978, it took a very noticeable jump or improvement in plant vigor and production after the turnout date was established at April 16. I also firmly feel that an additional reduction (in addition to the 1978 reduction) as proposed, is neither necessary nor warranted since the allotment is improving.

I feel the BLM has lost all credibility when they state in writing that the bureau will impose an additional reduction of AUMs on us with total disregard and disinterest to past agreements which state that any further adjustment in livestock numbers will be based on utilization studies and Actual Use Reports. I can not understand why you would want to hang your hat, so to speak, on a range survey which your EIS figures are dependent, when the survey was conducted during a drought year, and when the results are even questioned by BLM personnel in the Vale District.

4. Table 1-6, proposed grazing systems

I feel a rest rotation grazing system as proposed for allotment 218 is not necessary, as range conditions are improving under the present grazing system.

- 5-5 5. Page 1-20 & 1-21
I could not find any justification for the 50% utilization limit identified under deferred rotation and rest rotation grazing systems. I realize there is a large amount of controversy and conflicting literature reports concerning an acceptable level of utilization. I have found from my own experience that range improvement can be achieved with a 60% utilization level under deferred rotation and rest rotation grazing systems.
6. Table 1-7, proposed range improvements
I would like to see more range improvements and maintenance of existing seedings identified for allotment 216. Especially if the BLM believes the proposed reduction is necessary. I do not see where 1.5 miles of fence and 2 reservoirs (neither reservoir holds water) could lead to such range improvement.
7. Page 1-28
I firmly believe it would be extremely beneficial to again, start allotment 216. I would also like to see much closer supervision of the program than before.

After reviewing the alternatives presented it would appear to me that alternative 4 with the following modifications would result in the most beneficial and positive impacts

- 1) do not graze wildlife exclosures
- 2) maintain a wildhorse herd in allotment 203
- 3) allocate forage to wildlife (big game)

- 5-6 The adverse impact of alternative 4 upon riparian vegetation is, I feel, overstated. The impact of intensive grazing management upon riparian vegetation is not fully understood. This quickly becomes apparent through a review of the most recent literature.

- 5-7 I also feel that fencing creeks to protect riparian areas will prove to be unsatisfactory for the following reasons.
- 1) such fences will require constant maintenance and supervision
 - 2) annual reconstruction will become necessary at creek crossings
 - 3) these areas will most likely become areas of heavy livestock concentrations, increasing maintenance needs
 - 4) trailing of livestock around exclosures may increase local soil erosion.

- 5-1 Insufficient data are available to determine the present condition class for each riparian area. However, district observations support the conclusion that the present vegetation condition of most riparian areas is below its ecotone potential. Consequently, most of these areas can improve in ecotone condition. BLM analysis indicates that grazing systems which meet the physiological needs of woody riparian plants will in most cases also meet the physiological needs of associated herbaceous species. Meeting the physiological needs of the grazed species, whether woody or herbaceous, will promote an increase in the composition of these species and thus result in improved ecotone condition (upward trend).

Although it was possible to predict trend, it was not possible to project future ecotone condition, since the present condition is not available.

- 5-2 The estimate of direct income loss to which the comment refers represents net income to ranch proprietors and workers rather than ranch gross income as calculated in the comment. See errata for impacts on Economic Conditions (page E-23) for additional discussion on the difference between gross income and personal income.

- 5-3 Page 3-2 of the DEIS indicates that implementation of the proposed action is an assumption and dependent upon a number of factors. However, past experience with similar proposals indicates the forage increases are attainable within the 15-year time frame.

- 5-4 The data used to develop the proposed grazing use levels (for each allotment) for Vale District and a portion of Baker District were gathered in 1976 and 1977. For the balance of Baker District, inventories were done in the late 1950's and early 1960's. Because of adverse climatic conditions, it was realized that the data would not be reliable in some cases for determining the livestock forage allocation although it would provide some other needed data. To offset this deficiency, actual use and utilization studies were initiated in 1978 for both districts. Simultaneously, many permittees in allotments where conditions indicated that a reduction was needed agreed to temporarily reduce their grazing use until the study results were available. Experience indicates that a minimum of 3 years information is necessary to determine long-term use adjustment. The results of the third year's studies will be compiled in the fall of 1980. Consequently, even though the planning documents included the 1976-1977 inventory results, the final decision concerning stocking will rely on all data available by the winter of 1980-81.

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 616
44 Union Boulevard
Lakewood, CO 80228

June 11, 1980

Mr. Murl W. Storms
Oregon State Director
Bureau of Land Management
729 N.E. Oregon Street
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

The Council has reviewed your draft environmental statement (DES) for the proposed Ironside Grazing Management Plan circulated for comment pursuant to Section 102(2)(C) of the National Environmental Policy Act. We note that the undertaking will affect the Oregon Trail, a property included in the National Register of Historic Places, as well as other properties potentially eligible for the National Register.

6-1

6-2

It is noted that no reference was made to the Programmatic Memorandum of Agreement of January 1980 between the Bureau of Land Management (BLM), the National Conference of State Historic Preservation Officers, and the Council regarding the Livestock Grazing and Range Improvement Program. A copy has been enclosed for your convenience. According to stipulation 1 of this document, BLM is required to complete one of the following three conditions: (1) To conduct Class I and Class II inventories of cultural resources, which are to be completed at an appropriate planning stage and prior to the preparation of the DES in accordance with BLM manual Section 8111; (2) To undertake an alternative to the inventory procedure with the State Historic Preservation Officer's (SHPO) consent during the interim years of 1979-1981; or (3) To request the consents of the Council pursuant to 36 CFR Part 800 of the Council's regulations, if an acceptable alternative cannot be negotiated with the SHPO. Evidence of the failure to agree with the SHPO on an alternative procedure should be forwarded to the Council with a request for Council comment on the specific determination of effect with appropriate supporting documentation in accordance with 36 CFR Section 800.6.

6-3

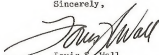
Circulation of a DES, however, does not fulfill your agency's responsibilities under Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320).

- 5-5 The degree of utilization selected is dependent upon the allotment objectives and present ecosite condition. Where a significant improvement in ecosite condition is desired, utilization levels were set at 50 percent of the key species. Where the present ecosite condition was satisfactory and the allotment objective was to maintain the ecosite condition, utilization limits were set at 60 percent of the key species' annual production under rest rotation on 50 percent under deferred rotation system.
- 5-6 The EIS uses the present resource situation as the baseline for measuring changes. At present, there are 77 riparian acres with livestock grazing excluded. Under Alternative 4, none of the riparian area would be excluded. Consequently, it is felt that Alternative 4 would be less advantageous to riparian areas than the present situation.
- 5-7 Reference to the impacts on soil erosion from livestock trailing has been added. See errata for page 3-20. Also see Vegetation Allocation on page 3-25 in the DEIS for impacts on wildlife on areas adjacent to exclusion areas.

Page 2
Mr. Karl W. Storms
Ironside Grazing Management Plan
June 11, 1980

6-4 Prior to the approval of the expenditure of any Federal funds or prior to the granting of any license, permit, or other approval for an undertaking, Federal agencies must afford the Council an opportunity to comment on the effect of the undertaking on properties included in or eligible for inclusion in the National Register in accordance with the Council's regulations (copy enclosed). Until these requirements are met, the Council considers the DEIS incomplete in its treatment of historical, archeological, architectural, and cultural resources. You should obtain the Council's substantive comments through the process outlined in 36 CFR Section 800.9. These comments should then be incorporated into any subsequent documents prepared to meet requirements under the National Environmental Policy Act. Ms. Marjorie Tagle may be contacted at (303) 234-4946, an FTS number, for further assistance.

Sincerely,



Louis A. Wall
Chief, Western Division
of Project Review

Enclosures

Response to comments in letter 6

- 6-1 As stated on page 3-44 of the DEIS, that portion of the Oregon Trail on the National Register would not be significantly impacted by the proposed action or alternatives. Further, no direct impacts would occur to other known sites eligible for the National Register. Insofar as range improvements close to known historic sites disturb the integrity of the setting, the interpretive, educational, recreational and esthetic potential of these sites may slightly decrease. Page 1-29 states that standard procedures require preparation of a site specific environmental assessment prior to implementation of range improvements and Allotment Management Plan (AMPs). The livestock grazing and range improvement programs are designed to avoid sites on or eligible for the National Register of Historic Places. Where it is not prudent or feasible to avoid adverse effects, BLM will consult with the Oregon State Historic Preservation Office (SHPO) and will develop mutually acceptable mitigating measures. The Advisory Council will be notified of the agreed upon mitigating measures. If the BLM and SHPO cannot agree on mitigating measures, BLM will request the Advisory Council's comments, pursuant to 36 CFR Part 800.6. This procedure is in accordance with the programmatic Memorandum of Agreement by and between the BLM, Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers, dated January 14, 1980.
- 6-2 The Final Programmatic Memorandum of Agreement (PMOA), ratified January 14, 1980, was not available in the Oregon State Office in time to be addressed in the DEIS. Cultural resources inventories were completed at the appropriate planning stage. There was no requirement for approval of inventory modification (as stipulated in the PMOA) at the time of the inventory. The third paragraph on page 1-22 has been modified. See errata for page 1-22.
- 6-3 As stated in 36 CFR Part 800.9, preparation of a DEIS may fulfill the requirements for reports and documentation under the National Historic Preservation Act and Executive Order 11593. Further, circulation of the DEIS constituted a request for comments from the Advisory Council in accordance with 36 CFR Part 800.4. See errata for page 1-22 and response to comment 6-2 for further clarification of BLM's intent to comply with Section 106 of the National Historic Preservation Act of 1966.
- 6-4 The BLM intends to comply fully with the provisions of 36 CFR Part 800.



NO REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Pacific Northwest Region
Fourth and Pike Building
Seattle, Washington 98101

June 19, 1980

L7619(PNR)PCC

Rangeland Resources
Program



Corvallis, Oregon 97331 (509) 754-3341

June 18, 1980

Mr. Murl Storass
Oregon State Director (911.1)
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Storm:

We have reviewed the Draft Ironside Grazing Management

Environmental Impact Statement, Oregon, and have no comments.

Sincerely yours,

Glenn D. Gallison
Glenn D. Gallison
Associate Regional Director,
Planning and Resource
Preservation

Mr. William Leavell
Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Leavell:

These are the comments of the Rangeland Resources Program of Oregon State University regarding the draft of the environmental impact statement for grazing in the Ironside Management Area. Our comments are offered to assist BLM in strengthening the scientific inputs used to develop the statement. It is hoped that the preparers of the statement will reconsider ecological judgements and correct what appear to be significant errors.

The classification of the lands in the survey appear to vary substantially from accepted ecological descriptions in the literature for Oregon and adjacent parts of the Pacific Northwest. The basis for classification is outlined on page 2-2 in an untitled table. The data upon which the basic ecological classification was made are incomplete but no explanation as to the other values included in definition of successional changes (trend) or for condition classification are given. We will illustrate the problem with an analysis of "ecosite" G-1 (grassland).

8-1

8-2

8-3

In the table on page 2-2 the climax vegetation as illustrated by dominant species is: *Agropyron spicatum* at 58% (of all plants in the climax), *Poa sandbergii* at 9% and *Poa cusickii* at 8%. This leaves 25% of the vegetation unaccounted for apparently in increments of less than 3% since the table includes a 3% value in a separate column. This leads to the conclusion that the G-1 site has less than 3% big sagebrush at climax and thus 20% of the area included in the environmental statement is natural grassland.

However, ecological studies and mapping done in the area and adjacent areas by Küchler, Daubenmire, Hironaka, Winward and others refute this contention. Küchler in his 1965 map of potential (climax) vegetation for the survey area classified the bulk of the area as sagebrush-steppe, with an area of saltbush-greasewood and a very small area of grassland in the extreme northeast portion of the

C-12

Year of
the
Visitor

environmental statement area. The Oregon SCS published a map in 1972 of kinds of rangeland and classified the environmental statement area as shrub-grass, except for a portion of natural grassland in the extreme northeast portion of the environmental statement area. Loy's (1976) Atlas of Oregon mapped natural vegetation of the environmental statement area as a big sagebrush zone with a small area of steppe (grassland) in the northeastern extreme of the environmental statement area. All of these reports indicated natural grasslands would make up 1 or 2% of the environmental statement area. Tisdale, Hironaka and Fosberg in 1969 published a map of potential (climax) vegetation in Idaho. Examination of the area along the Oregon/Idaho border in the statement area indicated a small area of climax grassland adjacent to the northeastern extreme of the environmental statement zone. The other adjacent areas are principally sagebrush-grass or salt-desert shrub.

8-4 The maps on pages 2-3 and 2-4 indicate locations for the various ecocline groups. Ecocline G-1 is generally scattered throughout the environmental statement area and the northeastern extreme which was classified as climax grassland by these ecologists is classified as a mixture of G-1, G-2 and G-3 (which is essentially a mixture of grassland and shrub-steppe). All of the conclusions relating to impacts of grazing are dependent upon correct classification of the rangelands. Was the rangeland classified correctly?

8-5 Our personal knowledge of the area and the published reports of the aforementioned range ecologists leads us to believe most of the areas classified G-1 are in fact sagebrush-grasslands at climax. If one accepts the data on associated species in the table on page 2-2 then there is no *Festuca idahoensis* in the areas classified as G-1. Therefore, most of these areas would probably be classified as an *Artemisia tridentata*/Agropyron spicatum habitat type (ecocline) with some amount of big sagebrush in the climax.

The relative amount of big sagebrush and all other species of vegetation in a climax stand is variable. Most ecologists classify habitat types on cover data rather than percent of standing crop which further complicates comparisons between results of ecological studies and the data form used in this environmental statement. However, the percent cover of sagebrush would tend to underestimate relative composition of sagebrush compared to percent composition on a weight basis. The information that follows is on a cover basis so comparatively the values are lower than they would be if computation of composition was on a weight basis.

Winward in his 1970 dissertation "Taxonomic and ecological relationships of the big sagebrush complex in Idaho" studied the *Artemisia tridentata* subsp. *wyomingensis*/Agropyron spicatum habitat type. This is essentially the same habitat type as is present on most of

the environmental statement area which is currently classified as G-1. He found the habitat type had an average sagebrush cover of 19% with a range of 14-22%. The lowest value he found after surveying many areas in Idaho that were at or near climax was larger than the highest value in the environmental statement for any of the big sagebrush types in the various ecoclines. The importance of this kind of difference will be discussed later in the analysis.

Daubenmire in his 1970 "Steppe vegetation of Washington" discusses two habitat types that could relate to the areas classified G-1. One is the *Agropyron spicatum*-*Poa secunda* (sandbergii) habitat type, which is a true grassland and the other is the *Artemisia tridentata*/Agropyron spicatum habitat type. The G-1 type could not be the *Agropyron spicatum*-*Poa secunda* habitat type since the habitat type does not contain *Poa cusickii* which is present in G-1 and no natural grassland in the Pacific Northwest has a shrub component in the seral stages following retrogression. Therefore, the G-1 type must be classified as a shrub-steppe or *Artemisia tridentata*/Agropyron spicatum habitat type. Daubenmire discussed the ecological status of this habitat type in great detail and pointed out a number of facts of real importance in understanding these rangelands. In stands that represented climax or near climax stages with no evidence of modification by livestock he found cover of big sagebrush ranged from 5-26%. Within this range of coverage of *Artemisia tridentata* there was no relationship with coverage of any species of perennial grass or with total cover of perennial grasses. He stated "Thus the quantitative data for 14 excellent stands reveal a wide variation in *Artemisia* coverage, which appears rather definitely not to reflect varying amounts of past grazing. Neither does *Artemisia* coverage correlate with any other variable in the data." Daubenmire's lifetime of work strongly suggested the interpretation of climax vegetation for site G-1 (and perhaps the other G series) is in error.

Hironaka (1979) in "Basic Synecological Relationships of the Columbia River Sagebrush Type, the Sagebrush Ecosystem: A Symposium at Utah State University" discussed invasion of grasslands by sagebrush in the Pacific Northwest. He stated, "There is no evidence that an extensive grassland steppe was present in southern Idaho and adjacent Oregon and that invasion by sagebrush became widespread since the advent of livestock grazing." This often held misconception that native grasslands within the sagebrush-steppe were invaded by sagebrush as a result of overgrazing was proposed by early scientists who did not fully understand the role of fire in these ecosystems. This is understandable as burned rangelands will often take on the appearance of natural grasslands following a fire and stay in the lower seral stage for many years. However, without a subsequent fire, sagebrush will always re-establish and take its part in the communities. The table on page 2-2 indicates *Artemisia tridentata* is present at a high level in late, middle and early successional stages, therefore these must be sagebrush/grass habitat types with a significant sagebrush component at climax.

The significance of this relates to evaluation of condition and trend. If we consider the solid research data reported by Deubenmire (1970) and Winward (1970) the *Artemisia tridentata/agropyron spicatum* habitat type will have from 5-25% sagebrush cover at climax. This is reflective of considerable variation that should be considered in evaluating condition. However, we can assume that coverage in this habitat type is probably near 15% on the average. So, if we consider all stands sampled had no sagebrush at climax we would have an average error of 15% for coverage. This will be increased as the data are converted to a weight basis to calculate composition as was done in the environmental statement. Rittenhouse and Sneva (1977, J. Range Manage. 30(1):68) indicated there was a relationship between cover (their W2) and weight of photosynthetic organs and woody twigs of Wyoming big sagebrush. This relationship was logarithmic with an r^2 of 73% for photosynthetic biomass (leaves) and 72% for woody parts. They also pointed out these data were collected while ephemeral leaves were on the plant so the relationship could change in summer when these leaves are shed.

Relationships reported for herbaceous vegetation were summarized by Brown (1954, Methods of Surveying and Measuring Vegetation). She indicated that no consistent relationships occur between coverage and weight but that cover and weight of grasses tend to be more closely related than for forbs. She stressed that inaccurate results would be obtained by using a constant correction factor over seasons to convert cover data to a weight basis. This same idea was suggested by Rittenhouse and Sneva for Wyoming big sagebrush.

From this we can expect that conversion of cover data (as published by SCS to describe climax communities) to a weight basis must be site, species and season specific to allow for accuracy in conversion. Further, the conversion of cover data to a weight basis to calculate percentage composition will probably result in a substantial increase in percentage of sagebrush as compared to grass. Therefore, if the G-1 types are mostly *Artemisia tridentata/agropyron spicatum* as suggested by this analysis, they may have an average of about 25% composition by weight of sagebrush at climax. Since the evaluation of condition assumed no sagebrush at climax the error in evaluation of G-1 could be off as much as one whole condition class. Furthermore, the natural variation is substantial so accurate determination of condition is difficult to complete from a general survey that cannot, by its nature, consider the range in variation encountered. While the condition and trend may be accurate over a wide scale including many stands of vegetation, on many specific allotments succession will be estimated as closer to or further from climax than is actually the case.

8-8 Beyond the problems with site identification and interpretation, the statement has grouped unlike SCS types into the various ecosites. This is not workable and no valid interpretations are possible with the groupings made in the G ecosites.

Some other apparent discrepancies are noted when comparing the yield values in the table on page 2-2. The values given in the table are much lower than in the SCS site guides for sites in each of the ecosites. For example, total yield of G-1 (which is a combination of 2 SCS sites) is given in the statement at climax as 450 lbs/acre. The SCS site guide (1961) for Droughty Rolling hills at climax in a normal year indicates 500-750 lbs/acre of available forage. This is equivalent to about 1500 lbs/acre or more of annual vegetation production. The table on page 2-2 indicates 165 lbs/acre of annual livestock forage production which should be equivalent in part to the 750 lbs/acre reported by SCS. The other component of G-1 is steep south slope. The 1961 SCS site guide indicates 250-400 lbs/acre at climax of available forage. If we take a simple average of these sites within G-1, the available forage according to SCS clipping data is about 475 lbs/acre and total production is about 950 lbs/acre which is more than twice that reported in this environmental statement. The differences in assessment of available forage could be a function of agency policy but total yield would be a biological factor independent of judgements. The wide range of difference between SCS and BLM estimates for these ecosites and since the SCS yield estimates are based on several years of evaluation, suggests substantial error in the data used as a basis for the environmental statement.

8-10 Page Bl-1 describes the technique used to determine ecosite condition and trend. The example given at the bottom of the page has one error, i.e. column 3 Idaho fescue should be 7 not 17.

8-11 The methodology described is the basic condition determination used by SCS and is straightforward. Some questions arise as to actual implementation of the process. The published SCS site guides base percent composition at climax on foliage cover not weight. Were the SCS figures corrected to a weight basis? If so, how? Did the statement preparers develop new composition values based on agency studies? If foliage cover estimates were corrected, exactly how was this done? The evaluation of this process is important as illustrated by the discussion of this process earlier in this letter.

8-12 Page Bl-3 gives a basis for apparent trend. This kind of evaluation can only be made by experienced range managers with knowledge of the plant communities being evaluated. Were the observers of apparent trend experienced managers that could make the correct

interpretations? For example, some habitat types in climax condition will have few seedlings establish in almost all years because of climatic variations and inter-and intra specific competition. Only someone who understands the ecosystems being evaluated is qualified to make judgements of probable trend and these range managers recognize they will make some errors when they are at their best.

Page B1-4 discusses forage production. The first two techniques; ocular reconnaissance and actual use/utilization will work within acceptable limits although the limit of 50% utilization is not substantiated. As long as year effects are considered, reasonable estimates of carrying capacity can be developed with actual use.

- 8-13 The forage capacity based on annual rainfall is totally without substance. For example, our file data for a 55.5 ha pasture indicates the following: yield for a curlyleaf mountain mahogany/Idaho fescue community in 1974 was 68 kg/ha and 72.4 kg/ha in 1975; a rubber rabbitbrush/bluebunch wheatgrass community had 297.6 kg/ha production in 1974 and 350.2 kg/ha in 1975; a basin wildrye-sandberg bluegrass community had 128.3 kg/ha production in 1974 and 149.0 kg/ha in 1975, etc. We assumed the rainfall of about 12" annually was uniform across the 55.5 ha. Annual forage yield is a function of site and annual precipitation records cannot be used to predict yield or carrying capacity independent of knowledge of the site.

After careful study of the ecological basis for this statement, we find a significant portion of it invalid and much of it impossible to interpret. We believe the environmental statement needs to be redone, since the only way it can be of use is if judgements as to uses allocated are based on correct definition and interpretation of the ecological situation for this rangeland area. Oregon State University Range Scientists will assist with the ecological studies and interpretations from these if requested.

Sincerely yours,

William C. Krueger

William C. Krueger
Program Leader

Al H. Winward

A. H. Winward
Associate Professor

cc: President Robert MacVicar
Dean E. J. Briskey

Response to comments in Letter 8

- 8-1 The table on page 2-2 of the DEIS has been changed to reflect some of the following comments and a title (Table 2-1 Ironside Ecosite Groups) as shown in the Table of Contents has been added (See errata for page 2-2). An explanation of the contents of Table 2-1 and the techniques used to gather the data is found on pages 2-5 through 2-8 of the DEIS.
- 8-2 The composition of Ecosite Group G-1, a composite of the Droughty Rolling Hills (DRH) and the Steep Droughty South (SDS) ecosites, has been recalculated and corrected on Table 2-1 (See errata for page 2-2).
- 8-3 Refer to corrected Table 2-1.
- 8-4 The ecosite groups displayed on Table 2-1 and shown on Figures 2-1a and 2-1b are a composite of information about two or more ecosites. As a result, it may not be totally representative of the individual ecosites. The individual ecosites were classified using the methodology developed by the U.S. Soil Conservation Service. The classification system has been in use a number of years and is widely accepted and technically correct.
- 8-5 See corrected Table 2-1
- 8-6 See corrected Table 2-1.
- 8-7 The ecosite classification system employed in the Ironside EIS area used concepts included in the S.C.S. National Range Handbook (NRH-1, July 13, 1976). Fire as well as grazing by native animals and insects are considered to be a natural part of the ecosystem. The amount of sagebrush (*Artemisia tridentata*) shown for each of the ecosite groups reflects these influences.
- 8-8 The determination of ecosite condition was completed in 1978 using data collected by a number of range and soil specialists using the previously mentioned methodology. Information concerning the soils and vegetation of 34 individual ecosites identified in the Ironside EIS area is found in the district planning documents.

The information displayed in the EIS is a composite of the district data. Because of the number of ecosites, it was not possible to treat each separately. Consequently, the ecosites with similarities, particularly livestock forage production and species composition, were combined into the six groups. The errors in species composition occurred during the process of combining the data and are not found in the data used by district personnel to determine ecosite condition.

- 8-9 As mentioned in response 8-8, the individual ecosites were combined into groups on the basis of similarity in species composition and livestock forage production. A number of other characteristics were more divergent; consequently, no attempt was made in the EIS to analyze or predict changes for each of the ecosite groups.
- 8-10 Appendix B1 has been corrected. See errata for page B1-1.
- 8-11 The vegetation production data displayed in Table 2-1 were gathered during 1977 and reflect several years of abnormally low precipitation. This problem was recognized and the districts have established actual use and utilization studies to help them set stocking levels on a number of allotments rather than relying on the 1977 survey results when the final decision was made. Nonetheless, this 1977 information was the best available when the planning documents were prepared and does display the relationship of production and dominant species among the six ecosite groups.
- 8-12 The apparent trend was a team effort involving experienced permanent range personnel and range management students from accredited colleges and universities.
- 8-13 The weakness of using annual precipitation as the sole criterion was well understood and the results of using this technique were not used to support proposals for livestock use changes. As mentioned in Appendix B, its use was limited to allotments composed of small or scattered tracts of public land intermingled with large blocks of private land. On these allotments, scheduled for nonintensive management, the results were used only to make an estimate of forage production.

SRM

SOCIETY FOR RANGE MANAGEMENT

Rangeland Resources Program
Oregon State University
Corvallis, Oregon 97331
June 20, 1980

Mr. William Leavell
Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Leavell:

The Society for Range Management wishes to take this opportunity to comment on the draft grazing environmental impact statement for the Ironside area in Oregon. The comment was prepared by members of the Pacific Northwest Section. We wish to emphasize at the outset our strong commitment to the intelligent and rational management of rangeland resources regardless of ownership status. We recognize that BLM has a commitment to manage resources for the benefit of all people and to help them better understand problems and opportunities in resource management.

Because the economic analysis of the proposed action and the several alternatives is not complete and because we know that others will be commenting on economic portions of the ES, no substantive comments will be offered. We would hope that the economic data would be compiled with realistic cattle prices and cost of production because the prices received over the past 5 years or so have varied widely which in turn have governed the number of cattle maintained for breeding.

- 9-1 Page B1-1, Table (middle column) percent composition of Idaho fescue should be 7 not 17.

Page B1-4. Forage production.

A. Actual use and amount or percent forage utilization are probably the best ways to assess and adjust overall stocking pressure in both time and space. Management decisions based on the correct use of these techniques should provide for a close overall estimate of the amount of grazing that a unit will support. This approach does have some short comings if, for example, grazing pressure is not distributed as uniformly as possible within and across sites in any



particular year. Animals consistently prefer the same species because of a number of factors including stage of growth, relative abundance, site, and weather which may also affect percent use on particular species. Forage production, of course, varies year to year within and among sites which affects the amount of forage used at the same stocking pressure.

- 9-2 Were these provisions considered when using this technique to arrive at AUM production? If so, AUM's produced should be reasonably accurate since the variation from site to site and year to year would have been included in the calculations. If not, we would recommend that more close monitoring occur than might be done otherwise to determine the relative accuracy of adjustment.

- 9-3 B. Forage capacity based on precipitation. This is an interesting table. From what data was it derived? What is the site variation within each zone and what is the effect of ecological condition? Numerous examples could be cited where stocking rates are 5 acres per AUM or better in the 10-12 inch precipitation zone. In the 16+ inch zone unless vegetation is in poor (early) condition, stocking rates should on the average be 3 acres per AUM or more. Thus, we would question the use of such a procedure without more substantive data presented.

- 9-4 C. Since some inventory was done in 1976 and 1977 in both the Baker and Vale Districts and both of these years were extremely droughty in eastern Oregon (1977 the worst on record and in many areas 1976 almost as bad) was any provision made for correction/adjustment? If so, it would be desirable to state how this was done. If not, there could be some rather serious errors encountered.

D. Page B1-5 and B1-9 and 10. Techniques to set forage production based on dominant site and condition where actual use/utilization records apparently do not exist.

- C-1-7 This technique presupposes or assumes that management unit or pasture boundaries are laid out in relation to site, that some particular site is representative of the pasture, and that a particular condition class of that site represents the pasture. We suggest that the accuracy of the production data could be questioned unless it can be consistently shown that the level of "dominance" of site and condition classes within sites is rather high (80% or more). The environmental statement should indicate some definitive criteria for dominance. Data for backup should include all sites and condition classes in each pasture and production by such in order to verify that one dominant site and condition class will be representative of the whole. If this analysis results in adjustments in grazing pressure from the present (up or down) we suggest that monitoring should be intensified in the first year of implementation in order to verify whether the adjustments are resulting in acceptable levels of use.
- 9-5

- 9-6 E. Page B1-10. The factor of 1.6 used for an improvement of available forage for each increase in one condition class is revealing. It is surprising that such a factor would be uniform among ecological sites. It would be desirable to cite supporting data and this should be done. In addition, some estimate of the variation that existed among samples and among conditions within the same sites should be presented.

Page 1-1. AUM's available. Analysis of figures in Table 1-1 and 1-2, together with data contained in appendix D on condition and trend, raises some question. Currently, livestock harvest 142,118 AUM's of forage and the mule deer populations are already at the Oregon Dept. of Fish & Wildlife management goal (page 1-2). Data in appendix D show the vegetation on approximately 21% of the area as improving, on 15% as declining and the balance as static. The environmental statement does not indicate the location of the declining 15% or the rate at which it is declining, nor is the same thing shown for the improving range.

- 9-7 Since 7,619 AUM's are allocated to wildlife, mostly mule deer it is assumed, and the populations are already using those AUM's, the total being used should equal 149,737 AUM's. Table 1-2 showed only 127,216 AUM's of forage available, yet 149,737 are being used. One concludes that 22,521 AUM's no longer exist. Some explanation of these discrepancies should appear in the environmental statement. Is the over 22,000 AUM difference due to overgrazing and by what animal, to lack of suitability and why, to sampling error? To what?

- 9-8 Table 1-2 shows 107,020 AUM's allocated to livestock and 11,977 AUM's to "nonconsumptive" uses. Such nonconsumptive uses should be described so that an analysis can be made to determine the values being traded for such uses.

SRM agrees that 15% of the vegetation in an area in declining condition requires some different management to reverse that trend. But, a reduction of 35,000 AUM's or 25% overall to 107,000 AUM's and a projected restoration of essentially the same number over 15 years when almost 150,000 AUM's are currently being used by livestock and wildlife gives rise to the logic of that level of reduction as necessary to accomplish an improving trend given the other range improvements being planned.

Page 1-28 to 1-45. The proposed action and the 5 alternatives all have merit for resource management/protection depending upon one's perspective. SRM does not wish to suggest that one is necessarily superior. Experience shows, however, that when incentives are incorporated into a plan, it has a significantly better chance of succeeding. For obvious reasons, livestock producers will not be receptive to an average 25% AUM reduction which the proposed action

calls for. SRM, at this time, is supportive of the 5 year phase-in period as outlined on page 1-30 and 1-41. We suggest adoption of this or a similar policy will increase incentives for good management on the part of all concerned. The incentives of avoiding all but an initial partial reduction and hopefully early restoration of privileges if superior management is practiced ought to be strongly considered by BLM. We further suggest that any decision have Coordinated Resource Management Planning included in the implementation of action.

Page 2-1. Vegetation. We believe that most observers and some recent studies, primarily in Idaho, will question that 70% of the environmental statement area is potential grassland. Perhaps this is a matter of interpretation more than error per se. Big sagebrush (at least 3 major subspecies of it) was a part of the potential vegetation of most, if not all, of the upland area. Are the habitat types mapped for the area? Table 2-1 shows the climax of G-1 (what habitat types are in G-1?) not to have sagebrush? Since Table 2-1 shows G-2 and G-3 with big sagebrush (which subspecies?) in significant amounts, it is questionable that they are potential grasslands.

Page 3-2. Impacts on vegetation. In the introduction it could be questioned whether one can say that all nutrients including water are fully utilized now regardless of ecological condition. Unless studies exist to prove that, it would be preferable to eliminate that statement. We cannot necessarily assume that an increase in one herbaceous species will result in a decrease in another, although this could well be true. Plant species do have different characteristics as far as nutrient and moisture withdrawal. Additionally, we should not necessarily expect big sagebrush to increase when herbaceous cover and production decrease because this can depend upon the subspecies. Mountain big sagebrush (*Artemisia tridentata* subspecies *vasqueziana*) often increases several-fold when herbaceous cover declines, but Wyoming big sagebrush (*Artemisia wyomingensis*) increases little when herbaceous cover declines.

Page 3-3, paragraph 1. Because the statement lumps impacts on vegetation among sites together, we believe meaningful analysis of any action is impossible. This may be acceptable if no real conclusions are to be made. All shrubland is lumped together and the statement made that limited potential for improvement exists. This is not necessarily true for *Artemisia arbuscula* but could well be for *Artemisia rigida*.

Page 3-6, paragraph 3. The environmental statement should be more positive when saying plant death will ultimately result in some areas where spring-summer grazing management is practiced. It is implied that little, if anything, is done about grazing distribution and management of livestock water. This is not sound management. We cannot agree with this conclusion because it implies that no management actions were taken to mitigate the poor effects.

Page 3-13 and 14. Clover Creek 2055 example. On such a small allotment with only 1,054 acres, how can rest rotation grazing be justified with so low a grazing capacity (64 AUM's)? It is implied that rest rotation will be used after crested wheatgrass is seeded. Rest rotation is not needed for crested wheatgrass management and in fact will result in differential grazing of other species if it is not grazed at the proper time. Crested wheatgrass can be used in a repeated seasonal manner at 2-4 acres per AUM, i.e. provide at least 60 AUM's from 240 acres while the remaining 760 acres are deferred. Of the 760 acres, 564 are grazeable and ought to provide at least 100 AUM's for a total of 160 AUM's not 64 after about 2-3 years. We would suggest that this scenario be played out rather than the negative reduction one offered. Further on, on page 3-16 the explanation does appear, but it is conservative, especially with the ability of crested wheatgrass to tolerate reasonably heavy levels of grazing use.

Page 3-25. If rest rotation grazing does not result in continued wildlife habitat improvement as is suggested at the bottom of the page, why use that grazing system? Is habitat actually lost or just the food removed from the grazed pasture by the livestock? With reasonable livestock management, it appears that impact on wildlife habitat may be overstated.

We trust that these comments will be helpful in preparing the final environmental statement and that the decision to be made will be acceptable to the range users as well as to the interested public. We would stress the importance of incentives and moderation coupled with coordinated management of all resources.

Sincerely yours,

Thomas E. Bedell
Thomas E. Bedell, Chairman
Pacific Northwest Section
Society for Range Management
Public Affairs Committee

TB:bcc

cc: Harold Heady, President SRM
Floyd Kinsinger, Executive Secretary, SRM
Eugene Eggleston, PNW Section President, SRM

Response to comments in Letter 9

9-1 Appendix B1-1 has been corrected. See Errata.

9-2 See response to comment 5-3

9-3 See response to comment 8-13

9-4 See response to comment 5-3

9-5 The concept of "dominant ecocline conditions" was not used to set the initial stocking level. Instead, it was used to establish the utilization limits for each pasture following the initial grazing use adjustment and to aid in selecting the type of grazing system needed to meet long-term ecocline condition objectives. However, it should be noted that in some cases use level or grazing system changes were recommended to meet other important objectives, i.e., wildlife, watershed, etc., even when condition of the dominant ecocline was satisfactory. Consequently, the adjustments proposed are not always determined solely by ecocline condition. In allotments where grazing use level adjustments are proposed, monitoring efforts (particularly actual use and utilization) would be intensified to provide sufficient data to evaluate the action, and to support any future use adjustments.

9-6 The 1.6 factor is not uniform among the various ecoclines; however, considering the time available, and the purpose for the data, it was felt derivation of the potential future production did not require developing a more precise result for each ecocline. This information would not necessarily produce a more accurate result because of the effect of the 1977 drought on the present production calculations.

The future forage production that was derived using the "1.6 factor" is used only as a guide to future production. The actual forage production will be determined using monitoring studies and a new allocation will be made only after a re-analysis of data and public input obtained through the Bureau planning process.

9-7 The difference between the AUMs currently used and the present forage production in Table 1-2 in the DEIS is assumed to constitute overgrazing. Currently, with active livestock use at some 142,000 AUMs, it is assumed that wildlife are presently getting a lesser share of the 7,619 AUMs allocated to them in the proposed action. The original range surveys made in the late 1950's and early 1960's did not measure the carrying capacity for wildlife; only livestock AUMs were measured. In addition, in the Vale District, many of the adjustments in livestock use that were scheduled to follow the range surveys were delayed pending completion of the Vale Project (an 11-year program of extensive range rehabilitation).

9-8 The 11,977 AUMs allocated to nonconsumptive use are mainly on areas considered unsuitable for grazing (steep slopes and/or long distances from water). Other nonconsumptive uses include study plots, recreation use and administrative sites.

9-9 Coordinated Resource Management Planning will be included in the implementation plan where schedule commitments and willingness of the parties permit. It is Bureau policy to coordinate with permittees, district grazing advisory boards and State and Federal agencies in development and implementation of allotment management plans. Some allotments have been identified for Coordinated Resource Management Plans.

9-10 The term "grassland" was used primarily to distinguish between ecoclines that in climax condition are predominately composed of grasses and those that are composed of shrubs. The term "grassland" does not imply that no shrubs are present, only that grasses dominate.

Even though grasses comprise 70 to 80 percent of the total composition in climax condition, these ecoclines may appear to be shrubland because of the height and canopy size of the relatively few shrubs.

9-11 It is recognized that, with the possible exception of those sites in climax condition, there are some unused nutrients. Also, a decrease in one species does not necessarily create an increase in others. However, as indicated on page 3-2, this assumption was made only for impact assessment purposes so that estimated changes in vegetation could be quantified.

The text on page 3-2 has been changed to reflect the information provided. See Errata.

9-12 The text on page 3-3, paragraph 3 has been changed. See Errata.

9-13 Although it is recognized that some change in management could be made to offset the adverse impacts of the spring/summer grazing system, past management often has gone unchanged even after adverse impacts were recognized. This analysis reflects this fact as well as the policy of making assessments on a worst case basis where impacts cannot be accurately predicted.

9-14 The rest rotation system proposed for Clover Creek involves other areas already fenced and can be implemented with a minimum of new fencing (2 miles) or other range improvements. This system will meet the objective of providing perennial competition to limit the expansion of yellow star thistle.

9-15 Loss of cover is the major factor that degrades wildlife habitat in riparian zones. During the rest year, dense herbaceous cover is established in the riparian zone. Grazing during the following years removes the herbaceous cover. After livestock use, nesting cover, winter cover and escape cover are inadequate to support optimum wildlife populations. The slow upward trend is due to increased shrub and tree growth which improves vertical structure. Again, much of the woody growth that occurs during the rest year is subsequently grazed off.



300 SOUTHWEST SIXTH AVENUE PORTLAND, OREGON

P.O. BOX 8037 PORTLAND, OREGON 97208

June 23, 1980

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Oregon State Director:

I am an economist with U.S. Bancorp, parent company of United States National Bank of Oregon. I was requested by the Joint Baker County Cattlemen's Association and Baker County Chamber of Commerce Economic Impact Committee to assist in assessing the economic impact analysis within the BLM "Ironside Grazing Management Impact Statement".

In my judgement, the BLM analysis underestimates the economic impact of the proposed action for the following reasons:

1. Exclusive attention on net personal income as the indicator of economic impact ignores the fact that economic impact is a multifaceted phenomenon. The gross income effect, as derived from the transactions type multiplier, is an important indicator of the level of economic activity. Consequently, the gross income effect must be included in assessing the cost of the proposed action. It is incorrect to assert that the net income effect is the "true" measure of economic loss.
2. Because ranching is a biological production process net ranch income is an inappropriate indicator of ranching's impact on the local economy. Ranch expenditures to maintain livestock continue, within the short run, independently of ranch net income. This is accomplished by increases in rancher indebtedness. Consequently, using net ranch income as the base to which the multiplier is applied underestimates the economic impact of AUM reduction. The historically derived net ranch income per AUM underestimates ranching's contribution to local economic activity. This effect is magnified by using average personal income in agriculture, table M-1, as a base from which net income per AUM is derived. The year 1976 obviously pulls down average personal income and consequently income per AUM.

3. The effect of a reduction in sales on the net income of a business activity in which fixed costs are important is not accurately measured by multiplying the change in sales by the average total revenue. Average net income per AUM multiplied by the change in AUM underestimates the total change in net income because fixed costs creates a divergence between average net revenue and marginal net revenue.

A 10% reduction in sales generates a 10% reduction in net income only if average fixed costs plus average variable cost equals marginal cost.

To see this consider the following:

Let NR = total net revenue

TR = total revenue

TC = total cost

then

TR = P · Q : P = price, Q = Quantity sold

TC = TFC + TVC : TFC = total fixed cost
TVC = total variable cost

NR = TR - TC

$$\text{Average net revenue} = \frac{NR}{Q} = \frac{TR}{Q} - \frac{TC}{Q}$$

$$= \frac{PQ}{Q} - \frac{TFC}{Q} - \frac{TVC}{Q}$$

$$\frac{NR}{Q} = P - AFC - AVC$$

AFC = Average fixed cost

AVC = Average variable cost

$$\text{Marginal Net Revenue} = \frac{\partial NR}{\partial Q} = \frac{\partial TR}{\partial Q} - \frac{\partial TC}{\partial Q}$$

$$\text{Assume } \frac{\partial P}{\partial Q} = 0 \text{ then } \frac{\partial NR}{\partial Q} = P - MC$$

MC = Marginal Cost

$$\frac{NR}{Q} - \frac{\partial NR}{\partial Q} = P - AFC - AVC - P + MC = -AFC - AVC + MC,$$

$$\text{Consequently: } \frac{NR}{Q} = \frac{\partial NR}{\partial Q} \text{ if } AFC + AVC = MC.$$

In ranching it appears very likely that $AFC + AVC > MC$ because of high average fixed cost. This means that using the average net income per AUM will underestimate the net revenue reduction resulting from AUM reduction.

June 23, 1980

SHEET NO. 3

10-4

4. The multiplier analysis utilized implicitly assumes that there are no income generating inter-county transactions. Reduction of income within Malheur county is expected to have a negative effect on Baker county income and similarly, reductions in Baker county income will tend to reduce Malheur county income with a consequent negative feedback to Baker county income. These income chains result from inter-county expenditures which are not considered in the BLM analysis.

In my judgement, the BLM economic impact analysis significantly underestimates the impact on the local economy of AUM reduction.

Sincerely,



Dennis E. Goodman
Economist
U.S. Bancorp

cc: Gordon Staker
District Manager - BLM
P.O. Box 987
Baker, Oregon 97814

Randy Guyer
Baker County Chamber of Commerce
490 Campbell Street
P.O. Box 69
Baker, Oregon 97814

Kevin Kelly
Vice President and Manager
Economics and Corporate Development
U.S. Bancorp

bc

Response to comments in Letter 10

- 10-1 Estimates of gross income and changes in gross income have been incorporated in the revised portions of Chapters 2 and 3 dealing with economic matters (pages E-7 through E-29). It is true that changes in the income of the community are more directly related to ranchers' sales and purchases than to ranchers' net (personal) income, but personal income is the proper measure of welfare or economic well-being. Gross income is a measure of business activity which may, or may not be profitable or contribute to well-being.
- 10-2 Increases in rancher indebtedness in poor years are offset by reductions in good years so that when both gross income and personal income are averaged to represent normal values, the impact of ranching on the local economy can be equally estimated from either value. Ranch net income fluctuates drastically from year to year, however, so what is "normal" is often controversial. Impacts on gross sales and personal income estimates are based on 1977-1979 data. Text reference to Appendix M which included 1976 data has been deleted.
- 10-3 It is true that fixed costs (those that do not vary with the amount of production) cause average net revenue per unit to vary with changes in the amount of production. The measure, "return above cash costs," however, excludes most fixed costs from consideration so that an average return above cash cost per unit may be considered a reasonably stable value for moderate changes in production. The text has been revised to emphasize the restricted use of this measure, and the significance of fixed costs to ranch operations. With regard to the conclusion of the mathematical presentation that $AFC + AVC > MC$, since average total cost (ATC) is the sum of average fixed cost (AFC) plus average variable cost (AVC), the statement means that marginal cost (MC) is less than average total cost. This implies that the marginal cost (the cost of producing the last unit sold) would never exceed the price regardless of how much production should exceed ranch carrying capacity. This is not true. It is true, however, that a loss in net revenue (or net income) may be understated when taken directly in proportion to the loss in production if there are significant fixed costs involved. The concept of "return above cash costs" was utilized in order to make an analysis in the absence of representative data on ranchers' fixed costs.
- 10-4 The income-generating effects of inter-county transactions were considered minor. Their expected slight influence on the conclusions did not warrant the substantial effort that would have been needed to develop the data.

C-21



Executive Department

155 COTTAGE STREET N.E., SALEM, OREGON 97310

June 23, 1980

Mr. Frank A. Edwards
Acting State Director
Bureau of Land Management
P. O. Box 2965
Portland, OR 97208

Dear Mr. Edwards:

Subject: Ironside Grazing and Management EIS
PNRS 8005 4 080

Thank you for submitting your draft Environmental Impact Statement for State of Oregon review and comment.

Your draft was referred to the appropriate state agencies. The Department of Historic Preservation offered the enclosed comments which should be addressed in preparation of your final Environmental Impact Statement.

We will expect to receive copies of the final statements as required by Council of Environmental Quality Guidelines.

Sincerely,

INTERGOVERNMENTAL RELATIONS DIVISION

Kay L. Wilcox
Kay Wilcox
A-95 Coordinator

KW:jh
Enclosure

P.S. Oregon Department of Fish and Wildlife comments are being sent direct to your office.

11



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
155 Cottage St. NE, Salem, Oregon, 97310
Phone Number: 378-3732

PNRS STATE REVIEW

Project #: 8005 4 080 Return Date: JUN 26 1980

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

If you cannot respond by the above return date, please call to arrange an extension at least one week prior to the review date.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

- () This project has no significant environmental impact.
- () The environmental impact is adequately described.
- (X) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement.
- () No comment.

Remarks

*Ironside Grazing Agmt
EIS*

How cultural resources will be handled is not really addressed in the EIS. (10.- avoid S1 sites, treat & hand seed, use some S2 sites to study grazing enhancement impacts, drill & seek S3 sites: all sites to get full reclamation, etc).

11-1

Agency

SHRO

By

L. Wilson

11-1 Page 1-22 of the DEIS identifies those standard procedures and design elements which would be adhered to in constructing range improvements in the EIS area. See response to comment 6-2 for further information. Mitigation measures, as necessary, will be developed in consultation with the State Historic Preservation Office and Advisory Council in accordance with procedures outlined in the Programmatic Memorandum of Agreement between the BLM, Advisory Council and National Conference of State Historic Preservation Officers, dated January 14, 1980. See errata for page 1-22.

Defenders OF WILDLIFE

12

P.O. Box 4491
Medford, Oregon 97501
June 22, 1980

To: Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

From: Sara Polenick
Northwest Field Representative
Defenders of Wildlife

Re: Draft Ironside Grazing Management Environmental Impact Statement

The following comments are submitted on behalf of Defenders of Wildlife, a national, nonprofit organization of about 50,000 members. We appreciate the opportunity to review this document.

My comments are organized in three sections: The first includes page-specific remarks, the second part contains some general impressions, and the third relates to several specific allotments.

Part 1, Page Specific Comments

iii 4 It would be useful to specify the deadline for comments in the initial document, rather than requiring the reader to estimate the filing date with EPA, publication in the Federal Register, then add the additional 60 days.

12-1 xiii To propose intensive management on about 91% of the BLM lands covered by this DEIS, and reserve only 1.6% of those lands for other uses without livestock being present, seems to be a disproportionate allocation of public resources. This emphasis is consistent throughout the document.

12-2 The implementation schedule deviates substantially from the "full force and effect" policy discussed in the November, 1979 BLM draft document Managing the Public Rangelands. Following the lengthy inventory, planning, EIS, public review phases, decisions were to be "implemented without delay," and phased in over a three year period. The Ironside plan allows five years, as specified by the "Zimmerman proposal." It is my understanding that this proposal has not been adopted by BLM, and is still being discussed. (See attachment A, BLM Instruction Memorandum No. 80-438, 4/11/80)

Defenders, page two

- 12-3 xiv While we appreciate the decision to remove cattle from slopes greater than 50 percent as a step in the right direction, we also wonder how BLM arrived at that figure. A 50 percent slope is steep enough to send a cow tumbling into the nearest creek, and will certainly encourage them to avoid such slopes and concentrate heavily in the low, flat areas, causing disproportionate damage. Thirty-five percent would be a much more realistic figure.
- 12-4 xvi The frequent use of phrases like "overgrazing under alternative 1" indicate that present management has been characterized by overgrazing. The term is clearly avoided in references to the other alternatives. Is the reader to assume that overgrazing will continue only if alternative 1 is implemented?
- 12-5 Wildlife Please explain how there will be "no substantial impacts to big game under the proposed action," (with intensive management) and an increase in deer mortalities under alternative 5 (designed to optimize wildlife values)? Other statements in this discussion need clarification and documentation as well.
- 6 xvii Where is site BA-31, and why was it not mentioned by allotment number or specified by location on the map? How can the destruction of sage grouse habitat be justified? What "improvement" is planned for this site?
- 1- Purpose and Need Paragraph two states that BLM is responsible for managing land in a manner that would maintain or improve the public land resources. This option does not appear to be consistent with BLM objectives as stated in the draft Managing the Public Rangelands. On page seven of that document, objective one is to "Improve the condition of rangeland vegetation and maintain it at desired levels of quality, quantity, and diversity."
- 12-7 1-1 In reference to general objectives, is the forage allocated to wildlife under the proposed action (7,619 AUMs) greater than the amount allocated presently? If the vegetation allocated to livestock is being increased from 107,020 to 143,301, will the forage for wildlife be increased proportionately?
- 12-8 1-2 - Vegetation Allocation The practice of allocating forage to wildlife only in areas which are unsuitable for livestock is clearly not in the public interest. Preferred areas should be equitably distributed, and livestock do not warrant preferential allocations.
- 12-9 Table 1-2 We are pleased to find that a variety of range management systems are applied to the allotments. However, in order to evaluate the system proposed for each area, it is necessary for the reader of the DEIS to know how these decisions were made. Were they based on range readiness studies in each case? If not, why? Do the recommended management systems differ substantially from the traditional use patterns? (They look quite similar on the chart.)

Defenders, page three

- 12-9 Of particular concern are the allotments for which early spring grazing is proposed, as substantial damage is known to occur at this time when cattle are allowed to nibble new growth and trample tender shoots.
- 12-10 Simple counting reveals that 209 of the 340 allotments (or 61%) allocate no forage for wildlife, yet virtually every allotment, according to Table 2-5 receives some wildlife use. Is this an oversight, or is there a conscious attempt to reduce wildlife populations on these allotments?
- 12-11 Although Table 1-2 indicates that there is some sheep use on several allotments, sheep are not discussed in the text.
- It would be helpful to include co-ordinates on the chart, so that allotments might be located easily on the accompanying maps.
- 12-12 1-10 - Livestock Reductions What are the criteria for sites selected for livestock reductions? How does the condition of the land fit into the picture? What other factors are considered?
- 12-13 Figures 1-2a and 1-2b - Livestock Exclusion Areas The DEIS needs a narrative description of the "livestock exclusion areas," including information about the condition of the land, type of terrain, specifications for construction projects, and reasons for the exclusion. Also, possible negative impacts on wildlife need to be addressed.
- 12-14 1-13 - Grazing Systems Please explain thoroughly how the 40 or 60 percent utilization of forage will be implemented. Will the utilization be uniformly distributed? How?
- 12-15 Please clarify the rationale behind the use of spring grazing. The discussion is unclear.
- 12-17 Page 1-20 To what extent are permittees' management needs considered in determining what system to propose for each allotment?
- 12-18 Page 1-22 - Range Improvement Projects How many additional cattle, or sheep can be placed on the range when the 8,659 AUMs of forage are produced? How many individuals will benefit from these additions, and what will be the economic gain? What will the improvements cost, and who pays?
- 12-19 Page 1-25 The DEIS states that important wildlife habitat would be excluded from vegetation manipulation projects unless treatment would provide direct wildlife benefit. How are "important" wildlife habitats defined? (See detailed comments on this topic in my section 3)
- 12-20 Page 1-26 - 2.4-3 The discussion of proposed herbicide treatments is completely inadequate. There is no information presented regarding the direct toxicity of this chemical to various plants, animals, and birds, fish, or humans. What is the effect of 2,4-d on soil micro-organisms? What will be the long-term impact of continued spraying on the ecosystem? How does this practice interfere with non-commodity uses of the land? What are the alternatives? Will streams in the vicinity of the spraysites be monitored before and after herbicide herbicide applications? Why is 75% planned for herbicide use, and

Defenders, page four

- 12-20 and only 25% of the site preparation by rangeland plow and burning combined? What is the cost of the herbicide applications?
- 12-21 1-26 - Non Intensive Management An effort should be made to derive the necessary information on the small tracts of public land which are intermingled with the larger parcels. Have land exchanges been considered to unify BLM's holdings and enable the agency to better manage the entire area as ecological units?
- 12-22 1-27 - Unallotted Status Does "unallotted" mean unused at the present time, but available upon request? If so, are there no lands in the Baker and Vale districts allotted to wildlife or non-consumptive uses because of their high value as a public resource? Please clarify.
- 12-23 1-27 - Monitoring Which "representative" riparian zones will be monitored? How are they selected? Should not all areas be monitored regularly?
- 12-24 Are any studies planned to inventory, then monitor nongame wildlife populations?
- 12-25 1-28 - Implementation Please explain the discrepancy between the five-year implementation schedule mentioned on page xiii, and the three-year period specified on page 1-28.
- 12-26 Have the "improvements" in the proposed action already been constructed? Please clarify.
- Table 1-11 Data on alternative 2 is excluded from the table. Why?
- 12-27 Under the proposed action, there will be short-term reductions, but long term increases in livestock AUMs. This table should specify the livestock use for short and long term for the proposed action, as it does for alternative four, which optimizes livestock use.
- Under alternative five, the one which supposedly optimizes wildlife, wild horses, and non-consumptive uses, still is characterized by a disproportionately large allocation of forage to livestock, and lists many allotments to which no AUMs would be given to wildlife. Please explain.
- 12-28 Figure 2-1a and 2-1b (Ecosite Maps) What is the difference between Grasslands 1, 2, and 3?

Defenders, page five

- Figures 2-2a and 2-2b (Riparian Zones) Insufficient attention and discussion has been devoted to riparian zones and wetlands. Authors of the final document should emphasize the importance of such areas to wildlife, livestock, and to other uses such as recreation. The maps showing riparian areas should also show wetlands such as marshy areas. Also, in reference to the maps, why do certain streams show no green for riparian zones?
- 12-29 Page 2-8 - Threatened and Endangered Plants Inadequate information is given on this topic. Specific location, when known, should be given, and directly correlated with specific allotments. Efforts should be made immediately to identify and protect the endangered plants from grazing and range "improvements."
- 12-30 Table 2-3 This table should provide additional information such as where the plants might be found, and whether they are preferred forage plants, and if they might be killed by 2,4-D. If such plants are found, or likely to be found in areas scheduled for spraying, the spraying should not take place.
- 12-31 Page 2-18 - Water Quality What measures will be taken to decrease the level of contamination of water in the DEIS area, particularly with respect to the high coliform bacteria count? What relationship exists between livestock use and this problem?
- 12-32 Page 2-18 Wildlife Since the topic will be considered at greater length in the general comments, I'll make only a few specific remarks about the section on wildlife. The grouping of wildlife into categories entitled mule deer, pronghorn antelope, elk, other mammals, upland game birds, other amphibians and reptiles, and fish is completely unacceptable. At the very least, a list should be provided which includes the species found in the EIS area, grouped by habitats in which they are found. Since maps were provided for soils, ecosystems, etc., it isn't unreasonable to expect wildlife habitats to be pictured in the same manner. If single species are selected for the purpose of presenting the data in the most concise form, then indicator species should be chosen which represent certain habitats in the area.
- 12-33 To assume that conflicts occur only between livestock and wild herbivores is misrepresenting the situation. Direct competition for forage is only one factor. Others include livestock destruction of plants needed for cover for breeding, and protection from predators. Certain wildlife avoid cattle, and there are direct mortalities caused by trampling, etc. These impacts are mentioned casually in several places, but a candid analysis of the severity of the impact of cattle on wildlife needs to be included.
- 12-34 The available data does not necessarily support the conclusion that predators and invertebrates are not impacted by livestock use on public land. Livestock operators are known to be enthusiastic advocates of government predator control activities conducted on their behalf. The nature and extent of both private and government efforts to "protect" sheep and cattle from various wildlife species in the EIS area should be included in the document.

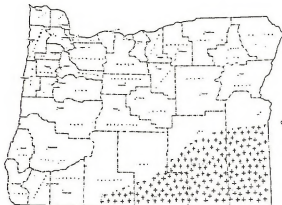
Defenders, page six

Table 2-5 - Wildlife This table is almost completely useless. A quick glance reveals that a minimum of staff time was devoted to its preparation. It has some value for determining the location of pronghorn and elk areas, but fails to distinguish between the areas which are used for calving, wintering, etc. It shows that deer are found in nearly every area, as are "other mammals" (never defined), reptiles and amphibians are everywhere, and that only two allotments have no "other birds."

12-35 2-18 - Threatened and Endangered Animals In addition to the obligation of BLM to protect listed endangered species, it is expected that steps will be taken to identify those species which might become endangered. The discussion in the DEIS ignores this responsibility.

Species of special concern which should be mentioned in the final document are listed below:

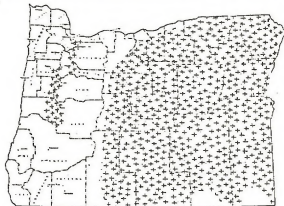
1. The range of the kit fox may overlap with the EIS area at the southern boundary, near the Idaho border. Recreational trapping, predator control activities, rodent control, and destruction of vegetation might affect this species, which is "protected" by Oregon Administrative Rule 635-07-360.



KIT FOX

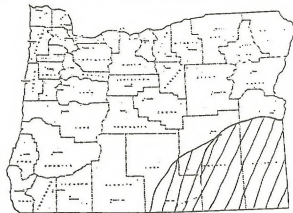
Defenders, page seven

2. The Western spotted Frog is found throughout the EIS area, and may well be impacted by grazing and related activities. It is also "protected" in Oregon.



WESTERN SPOTTED FROG

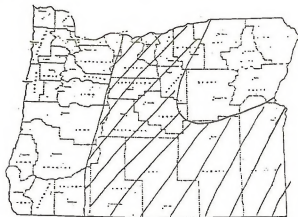
3. Collared and leopard lizards may also be found in the southern part of the EIS area, and are "protected" in Oregon.



COLLARED LIZARD
&
LEOPARD LIZARD

Defenders, page eight

4. The range of the protected short-horned lizard is within the Vale district.



SHORT HORNE LIZARD

5. Some concern has been expressed about the effect of sagebrush destruction on the pygmy rabbit. What is the distribution of this animal in the EIS area? Please include a discussion in the final EIS.

Table 2-6 The figures show that 75% of the streams in the EIS area are in fair, poor, or unknown condition, that only 25% are in good or excellent condition, and that only 20% are improving. These facts clearly illustrate the need to remove the cattle from these fragile areas, and allow them to recover.

It would be useful to include figures on this table which project the degree to which these streams are likely to improve after the proposed action is implemented.

2-23 - Mule Deer Where is the critical habitat for deer in this area?

Positive steps need to be taken to improve the condition of riparian habitat for deer and other species.

What steps will be taken to mitigate the adverse impact of cattle and "improvements" on deer in the listed allotments?

Defenders, page nine

Page 2-24 - Fish Fish habitat and populations appear to be the most adversely affected as shown on Table 2-7.

The candid assessment under "comments" is appreciated, as there is no question that cattle grazing is responsible for the fact that every stream except two (one without grazing) is in poor, fair, or unknown condition.

The objective should be to restore each of these areas to good or excellent condition in a reasonable period of time.

Page 2-27 - Recreation The first sentence, "Recreational hunting opportunities exist for big game, small or nongame, upland game and waterfowl hunting," does not make sense. Nongame means not hunted.

To what degree does livestock fencing, etc. interfere with public access to recreation areas? Is the public denied access to land which is leased for cattle grazing?

Page 2-30 - Visual Management Resource Classes The EIS needs to include an explanation as to why only one site in the Vale District, and not a single site in the Baker District is classified as VRM I. Some natural, or primitive lands should be present in each area.

Page 2-34 - Wilderness Values and Ecologically Significant Areas The sites which were recommended for more intensive inventory should be identified by map in the FEIS, as should the ecologically significant sites identified by the Nature Conservancy. It is not apparent that special consideration has been given to these areas.

Table 2-20 - Ecologically Significant Areas The reference numbers given for these sites do not correspond to other data in the EIS, therefore are nearly impossible to correlate with allotment numbers, etc.

Page 3-1 - Environmental Consequences One option, apparently not considered, would be simply to reduce the number of livestock on allotments which are not scheduled for "improvements." The land would certainly improve, and at a greatly reduced cost compared to the areas which will be intensively managed.

Page 3-12 - Spraying and Seeding Many of the plants impacted by 2,4-D are quite desirable from a wildlife and/or aesthetic point of view. Most produce attractive flowers, and some are important as forage or cover plants. Crested wheatgrass seedlings, although useful to cattle, form ecological wastelands. If certain areas are to be allocated specifically to cattle through such seedings, other areas should be allocated to wildlife, and cattle should be excluded.

What other "herbaceous species" will be seeded with crested wheatgrass?

Defenders, page ten

- 12-46 Must each seeded area be re-sprayed and re-seeded every ten to fifteen years?

Page 3-19

How can the proposed action be justified if it will continue to allow erosion on 271 miles of streambank?

Page 3-33 - Impact on Wildlife Wildlife populations should be monitored to determine the impacts of past and present management systems.

- 12-47 Page 3-25 If exclusion of grazing would result in rapid improvement of wildlife habitat, then this should be a component of one or more of the alternatives presented in the document.

Page 3-27 Adequate protection to prevent further degradation of riparian areas does not appear to be likely in the proposed management plan. In fact, according to Table 3-8, the condition of riparian areas under the proposed action does not differ appreciably from the alternatives (3,4) which limit grazing reductions and optimize livestock use.

Page 3-47 - Impacts on Energy Use The intensive management system proposed for the Ironside EIS area is vulnerable to criticism purely on an energy-efficiency basis. To utilize the equivalent of nearly .1% of Oregon's 1978 gasoline consumption to construct and maintain "range improvements" is of questionable benefit.

Defenders, page eleven

Part Two, General Comments

Format After wading through the Ironside EIS several times, I wondered if the CEQ guidelines were followed closely in the preparation of the document. Also, it seems as if some of the redundancy might have been avoided, and several of the sections written in a more comprehensible fashion. For example, although I am not familiar with scientific literature in the field of plant ecology, the sections on vegetation management read like doubletalk. A straightforward description of the land and vegetation, and the condition in which they are found would be helpful.

The most disturbing feature about the format, however, was the difficulty in correlating the data presented in various sections to complete a picture for any particular area. This situation might be corrected in the final document in several ways:

- 12-48 1) The best, unfortunately the most expensive, would be to use transparent overlays depicting various information on maps. (have maps of this sort been prepared in the district offices?)
- 2) Also helpful would be a chart, similar to Table 1-2, but containing all of the following information: allotment number, map co-ordinates, number of acres of public and private land involved, condition and trend, number of miles (or acres) of riparian and/or wetland, with condition and trend noted, proposed improvements, presence of unique ecological features, historical sites, important wildlife habitats, threatened and endangered, as well as unique species of plants and animals, recreational value, and other comments.
- 3) Also useful, either in addition to, or in place of the chart described above, would be a narrative description of each allotment containing the same information. (See section three of my comments.)
- Alternatives The alternatives presented in the DEIS are misleading. The no action (1) and eliminate grazing (2) options are not given serious consideration in the document. The proposed action, alternative 3 (which would limit grazing reductions), and 4 (which would optimize livestock values) are not appreciably different from each other. The proposed action, in fact, does present limited grazing reductions and optimizes livestock values to the point of nearly excluding other uses except to the extent that they are compatible with cattle. Even the alternative which was designed to optimize wildlife and other values emphasizes livestock use. We therefore do not support any of the alternatives, as presented.

The proposed action should provide a mechanism for improving the quality of BLM lands in question, for all uses, not just livestock, as required by FLPMA (1976) Sec. 101 (8).

the public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;

We strenuously object to the decision to allocate all of the proposed increases in range productivity to livestock, and feel that this violates the letter and the spirit of several statutes governing the management of federal lands. The proposal should set forth a plan which assures that all uses receive equitable consideration, and specify exactly how each use will be reconciled during monitoring and readjustment processes. As range conditions improve, a pro rata increase in wildlife forage should accompany any proposed increases for livestock.

Wildlife should receive top priority until livestock have reached an equalized state. This is not unreasonable in view of the fact that livestock have received a disproportionate share of the resource for the last century, and wildlife has been adversely affected as a result. (See attachment B)

Riparian Areas Although riparian areas are acknowledged to be the most valuable to wildlife, and constitute a minute fraction of the total area covered by the Ironside EIS, none of the alternatives propose management which will adequately protect these areas. The riparian habitats in both the Baker and Vale districts are admittedly seriously degraded and desperately in need of rest from cattle use. Wetland and riparian areas must be recognized by BLM as inherently unsuitable for any more than light, infrequent grazing. Corridor fencing, while protecting the riparian areas, causes other problems in obstructing herbivore migration and interfering with public access. In particularly valuable, or exceptionally scenic riparian areas, cattle should be completely excluded.

A candid description of damage caused by cattle is attached (C). This information relates to a nearby area. The material was taken from the Preliminary Draft South Fork of the Snake River Environmental Assessment.

Range Improvements The proposed "improvements" are of questionable benefit for a number of reasons. They may enhance the value of the land to livestock, but often degrade it for other uses by reducing the diversity of vegetation to wildlife, impairing the scenic quality, even jeopardizing species of plants and animals whose status is precarious.

As we noted in our comments on Managing the Public Rangelands, we believe a clear hierarchy of preferred range improvement techniques can and should be established. From an environmental and wildlife perspective, the use of fire and re-seeding of native vegetation is better and less destructive than other "tools" like herbicides. When choosing between several alternative methods, the less destructive methods must be required instead of the more destructive ones. This is consistent with the intent of NEPA, FLPMA, and other laws, and it would help guide the discussion of alternative management strategies.

12-49 The DEIS also completely avoided an economic analysis of the range improvements. They are extremely expensive, both in actual dollars and energy consumption.

Some improvements encourage livestock to use areas previously lightly grazed, thereby extending the damage. Increased livestock use invariably leads to reduced diversity, cover, forage for wildlife, unless positive steps are taken to assure that the improvements are designed to equitably balance the benefits to several important uses. A careful analysis of the proposed improvements suggests that the primary purpose for them is to make ranching more profitable or more convenient for the ranchers.

Wildlife The discussion of wildlife in the DEIS was particularly disappointing. It was based on the assumption that "wildlife" refers primarily to wild ungulate populations, and, to a lesser extent, game birds. Hundreds of other species are known to occur in the Baker and Vale districts, and were summarily dismissed in one paragraph, then carelessly clumped under "other."

We strongly encourage a more sophisticated approach in the final document, which recognizes the value of balance and diversity in wildlife populations. There is also a need to include more information on all wildlife species, their ranges, distribution, critical habitat, status, etc. Much of this data is available from Oregon Department of Fish and Wildlife biologists in the area, from The Nature Conservancy in Portland, and from the biology department at Oregon State University (Dr. Robert Storm).

Socio-economic Considerations Also disappointing was the discussion of economic impacts. While it was useful to find that only 9% of the economy of the Baker District, and 19% of the Vale economy is dependent upon public land grazing, this is only part of a much larger picture.

12-51 Also important is an analysis of the role of public land in beef production in Oregon and thenation. What percentage of the country's beef is raised on public land?

Defenders, page fourteen

12-52 Other important economic factors were absent. For example, why not include a cost/benefit analysis of "range improvements?" Who pays? Who benefits? Do ranchers spray and seed their own lands? Are these practices cost effective? How much money is generated in the Baker and Vale districts through grazing fees? How much will the range improvements cost? Is a deficit involved?

12-53 Also, there was no attempt to quantify resource values except in terms of livestock forage and the impact of the action upon the local economy. While this is certainly important, particularly to those involved, it is crucial to bear in mind that BLM lands do belong to the public, and cannot be managed specifically to benefit the people who are using them at the moment, particularly if the use results in long-term, irreversible damage. In the final document, it would be helpful to include a straightforward discussion of the trade-offs involved, and weigh the costs and benefits to the public. Livestock use should be compatible with, not dominate all other uses.

Part Three, Specific Allotments

C-30 Unfortunately, time limitations prevent a complete analysis, by allotment, of the impacts likely to result from the implementation of the proposed action. The format of the DEIS, and the numerous "missing links" make such a review beyond the range of feasibility. Ideally, if the data were presented in a straightforward and organized way, it should be possible to evaluate characteristics, conditions, and the proposed improvements on each allotment, and recommend specific actions. Without having actually seen the land involved, such recommendations, based on limited data, are highly speculative. However, the management proposed for several of the allotments raises some questions which need to be addressed.

Allotment #1302, North Bridgeport

According to the DEIS, this unit, located North of Burnt River, includes 11,114 acres of public land, and 7,404 acres of other land. It is scheduled for intensive management, to be grazed May 15 through October 15, according to a deferred rotation plan, as it has in the past.

A game map, prepared by BLM, shows that the area is used by wintering deer and elk. The DEIS also shows that deer and elk occur on this allotment. Since it includes several streams, the riparian areas, if they were in good condition, would offer habitat for a variety of other species, but the data is not given.

The forage production is now 1,268 AUMs. The proposed allocation includes 691 AUMs for livestock (down 253), 577 for nonconsumptive use, and none for wildlife. Even under alternative 5 (p. 1-36) which is designed to optimize wildlife use, no AUMs are allocated for wildlife!

Defenders, page fifteen

The proposed action calls for the construction of 2.75 miles of fence, an 8 acre enclosure, and, under alternative four, 960 acres would be treated to control brush, and juniper would be removed on 1,290 acres.

The allotment includes 2.5 miles of public stream in "unknown condition," but the stream is thought to contain Rainbow trout. The area may be within the Burnt River Canyon which is identified as ecologically significant, but it is impossible to tell, because it is not clear what the "reference numbers" on page 2-35 refer to, and the sites are not shown on the map.

In reference to allotment # 1302,

- 1) Why were no AUMs allotted to wildlife in an important deer and elk area?
- 2) Where will the fencing be, and why is it being built?
- 3) Please describe the design and the purpose for the enclosure.
- 4) What is the cost of the construction projects?
- 5) Why were the streams not surveyed, and how will the improvement monitored without this information?
- 6) What is the condition of this allotment, generally?
- 7) Are there more appropriate uses for this area than for livestock grazing?

12-54

Allotment #5215, Denny Flat

This allotment includes 6,620 acres of public land, and 1,160 other acres. Also in the Burnt River area, it is scheduled for intensive management under rest rotation from April 16 to June 15. Again, this is the same as traditional use. All 376 AUMs are allocated to livestock, none to wildlife, none to nonconsumptive uses. No adjustments (or grazing reductions) are proposed.

The anticipated forage increase (351 AUMs) will presumably result from massive investments in seeding 1,020 acres, controlling brush on 3,000 acres, constructing 2.25 miles of fence, building two reservoirs and a 100 acre exclusion. All increased AUMs will go to livestock. Again, alternative 5 (optimize wildlife) recommends that no AUMs go to wildlife, but 78 would go to nonconsumptive uses. Under alternative 4, an additional 720 acres would be treated to control brush, and another .8 miles of fence would be constructed.

Defenders, page sixteen

The DEIS data shows that mule deer, pronghorn, other mammals and birds, amphibians, reptiles and fish occur on the allotment. The BLM game map (not included in DEIS) reveals that this is an important deer wintering area, and sage grouse strutting ground.

Streams in the Denny Flat allotment are in poor condition, the trend is static. In spite of the degraded water quality, Rainbow, Bridgelp suckers, Dace, and Redside shiners are found in the streams, which have been depleted by irrigation and contaminated by the return flow.

Again, this area may be ecologically significant, but it is impossible to determine by looking at the DEIS.

Similar questions arise:

- 1) Why were no AUMs allocated to wildlife?
- 2) Is this part of the Burnt River Canyon which has been found to be ecologically significant?
- 3) Who will benefit from the improvements?
- 4) How much will the improvements cost?
- 5) What action will be taken to restore the riparian vegetation and water quality to acceptable levels?
- 6) What is the potential value of this allotment as a public recreation area or wildlife preserve?
- 7) What will be the adverse impacts on wildlife which will result from the herbicide spraying and other "improvements"?
- 8) How can this management possibly be called "multiple use"?
- 9) How many cows graze on this allotment?
- 10) How many cows will it support if the anticipated forage increases are achieved?
- 11) What is the general condition of this allotment?

Additional Information from BLM Game Maps

- 1) Massive seeding and brush control projects are proposed for allotment # 3001, an important elk wintering area. What effect will these projects have on the elk and other wildlife?

12-56

- 2) The Powder River corridor is an important deer wintering area. How will the seeding projects in allotments # 2024 and 2017 affect the deer?
- 3) Allotments # 2108, 2109, 2005, and 2074 are within the antelope wintering areas identified on BLM maps. How will the brush removal impact the antelope?
- 4) Deer also winter in allotment # 1002, proposed for brush control and spraying.
- 5) Allotments # 102 and 105 both fall within an antelope wintering area. Both seeding and brush control are proposed for this area.
- 6) A large portion of # 201 is scheduled for seeding. This is within the deer winter range.

This list is certainly not intended to be complete or exhaustive. It is simply a sample of the instances in which the proposed action may adversely affect the game species for which data is readily available. A complete analysis is needed to account for other species, and determine the impacts of the various alternatives on the wildlife present in those areas.

Again, we are pleased to comment on this document, and appreciate your efforts to involve the public in the crucial decisions regarding the management of our rangelands. You can be certain that Defenders will support wholeheartedly your efforts to rehabilitate and protect the lands for which you're responsible.

Please send a copy of the final document to me (P.O. Box 4491, Medford, Oregon 97501) and to our Washington office (1244 19th NW, Washington, D.C. 20036). We'd also like to be notified if any public meetings are held regarding this statement or its implementation.

C-31

12-55

12-56

Response to comments in Letter 12

12-1 Wildlife use occurs throughout the EIS area and would continue, at varying levels, under any of the alternatives. Allocations to livestock do not preclude other uses. In all alternatives but Alternative 4, the allocation of livestock forage to wildlife, and the grazing system objectives for many allotments, recognize wildlife use.

12-2 The proposed Ironside grazing management program consists of three major facets: (1) adjustment of grazing use to the available forage supply, (2) completion of the range improvements and (3) initiation of the proposed grazing systems. As indicated on page 1-28 of the DEIS, the grazing use adjustments would be completed within 3 years. The completion of the needed range improvements and initiation of grazing systems would occur during the 3 year adjustment period and, on some allotments, would continue for as much as 2 years longer. As a result, implementation of the entire proposed action would require 3 years. This is not the same as the "Zimmerman Proposal", which basically calls for phasing of the needed livestock reductions over a 5-year period. Present regulations provide for a 3-year phased reduction.

12-3 The suitability criteria adopted by BLM are based on a number of different research projects conducted throughout the West. Suitability adjustments are not designed to remove cattle from slopes above 50 percent. They are only applied to arrive at a stocking rate which will maintain or improve resource conditions on the more accessible areas below.

12-4 The proposed short-term allocation is within the present forage production of 127,000 AUMs for all the alternatives except Alternative 1, as shown on Table 1-11 (The allocation under Alternative 3 would equal the forage production after the final phase of reductions). Some overgrazing may occur in wildlife concentration areas under Alternative 4, since wildlife would not receive the allocation they would under the proposed action.

12-5 See page 3-30 of the DEIS. Slight to moderate changes of forage availability would not affect populations because cover rather than food has been identified as the major limiting factor.

One of the components of Alternative 5 is to exclude livestock from all riparian areas, an action which would require approximately 700 miles of fence. The design of these fences would probably include more wires, higher top wire, and bottom wire lower to ground, than the normal livestock fence.

Since riparian zones are "travel lanes" where deer often concentrate, fences in riparian zones would have to be crossed many times by individual deer and thus increase the chances of a fatal mishap.

12-6 The location of site BA-31 is listed on page 2-35 of the draft EIS. This location, as taken from Nature Conservancy (1978), covers about 36 square miles and includes portions of Allotments 2007, 2050, 2067, 2074, 2076, 2087, 2102, 2103, 2120 and 2130. Impacts were analyzed on the basis of the site's general locations. Maps which accompany Nature Conservancy (1978) show the general locations of ecologically significant sites. The Nature Conservancy is in the process of refining their inventory and more site specific information is available from them at present. In a worst case situation, the impacts of 760 acres of brush control in Allotment 2074 Pritchard Creek would be slightly adverse to sage grouse as nesting and escape cover are reduced. Page 1-29 states that standard procedures require preparation of a site specific environmental assessment prior to the implementation of range improvements and Allotment Management Plans. It is also standard procedure to exclude important wildlife habitat from vegetative manipulation projects unless treatment would provide direct wildlife enhancement (see page 1-25). An environmental assessment will analyze the conflict with site BA-31 and develop appropriate mitigative measures.

12-7 The proposed allocation represents a 7,619 AUM increase over the present allocation.

The allocation included in the proposed action was designed to supply sufficient forage to carry wildlife populations at levels presently agreed to by ODWP and BLM (approximately present levels). Future forage allocations would be determined through the Bureau Planning System and would be based upon wildlife needs at that time. However, for analysis purposes, it was assumed that all future forage increases would be allocated to livestock.

12-8 The allocation to wildlife consists of two parts. The majority of the wildlife allocation was not quantified in the EIS and consists of forage from plants which are grazed lightly or not at all by livestock but are preferred by wildlife. Because of their dietary differences, there is seldom competition between livestock and wildlife for the species that make up this part of the allocation.

The second but smaller portion of the wildlife allocation (7,619 AUMs) consists of forage from plants which are preferred by both livestock and wildlife. Some of this forage is found on areas unsuitable for livestock grazing but grazed by wildlife. The remainder is found on areas used by both livestock and wildlife or on areas preferred by wildlife but excluded from livestock grazing.

12-9 Grazing management systems are designed to achieve various vegetation objectives. These objectives are based upon problems and issues identified for each allotment and take into account criteria such as forage production (present and potential), soil characteristics, ecosite condition, presence of sensitive and poisonous plants, wildlife vegetation needs and potential, range readiness, livestock suitability, as well as many others.

Grazing systems similar to those proposed are in use now in the EIS area. The proposed action would continue these grazing systems in allotments where resource objectives could be met with the current system. Where the proposed resource objectives cannot be met with the present grazing system, a new one has been proposed (Refer to Table 1-6).

12-10 One cannot assume that the absence of a formal allocation of vegetation to wildlife will reduce wildlife populations. The allocation of livestock AUMs shown in Table 1-2 is only a small part of the total vegetation available. (See response to 12-8.) More total vegetation is produced than is consumed by livestock. The balance is therefore available to wildlife. The vegetation allocation to livestock has been analyzed on pages 3-25, 3-29, 3-31 and 3-36. The wildlife vegetation allocation was calculated using big game population numbers. In allotments with no wildlife AUMs, big game use is negligible or there is no significant forage conflict with livestock. See response to comments 24-8 and 24-10.

12-11 Sheep use is very minor in the EIS area. About 575 AUMs, 0.4 percent of the 1978 active use were used by sheep. This amount was felt to be insignificant, so current levels of sheep use were not analyzed.

12-12 Livestock reductions are proposed on areas where the present use exceeds the calculated grazing capacity. In addition, reductions are proposed where insufficient forage is available to provide for the desired level of allocation to wildlife, nonconsumptive uses or wild horses. Unsatisfactory ecologic condition and/or downward trend are among the more important indicators of improper stocking levels and are always a consideration when establishing new livestock use levels, seasons of use and/or grazing systems.

12-13 Livestock exclusion areas are usually associated with riparian zones where rapid (less than 5 years) wildlife habitat improvement is the management objective. Riparian areas which have the vegetative potential to greatly improve wildlife habitat receive a high priority for exclusion. Several streams located in steep canyons were selected because natural barriers could be used with relatively little new fencing to exclude livestock. Site specific information for each exclusion can be obtained from the Vale and Baker District Offices.

12-14 Dense vegetation in enclosures may be accompanied by decreased populations of some small mammals such as ground squirrels. Dense vegetation may hinder quail and chukar movement. None of these impacts were judged to be significant. As stated on page 3-25, severe livestock utilization adjacent to enclosures would result in degraded wildlife habitat. Soil erosion from livestock trailing along enclosure fences could occur. See errata for page 3-20.

12-15 The utilization level for each grazing system is one of the factors to be considered in measuring progress towards meeting the objectives for each allotment. If the degree of utilization either exceeds or falls below the desired level, this will indicate a need for changing the grazing system or the stocking rate.

The degree of utilization is measured each year in the grazed pasture after the livestock have been removed. Several areas are selected for measurement so that an accurate reflection of the degree of utilization may be obtained. Utilization normally varies considerably throughout a pasture or allotment due to differences in plant composition, terrain and artificial features, location of water, shade, salt blocks, etc.

Some control over the degree of utilization can be obtained through the placement of salt, control of water and livestock movement. However, the negative effects of localized over-utilization can best be offset by implementation of a grazing system which provides periodic rest to allow the heavily grazed plants an opportunity to regain vigor and reproduce.

12-16 Livestock (cattle) diet analyses indicate that in early spring cattle consume grasses almost exclusively. Consequently, cattle use during this period results in virtually no use of the key woody species. Based on past experience, this system would allow woody species to increase on both riparian areas and on areas where woody species have been planted for wildlife use.

12-17 The grazing system ultimately selected for an allotment must first be capable of achieving resource objectives and second, must be feasible for the permittee. On most allotments, more than one grazing system will meet resource objectives. During the AMP development and consultation process, permittee management needs are considered, and where possible, the grazing system selected will address those needs.

12-18 The number of cattle that could be placed on the range due to the additional 8,659 AUMs would be dependent on the length of time the cattle would be grazing. For instance, assuming a 5 month grazing period, 1,732 cattle would graze 8,659 AUMs. At this time, there is no way of estimating how many individuals would benefit from the range improvement projects as allocation of the forage increase will not take place until after they occur. See response to comment 12-52 for an estimate of the cost of and payment for the improvements.

12-19 All crucial habitats (See glossary definition page C-2) are "important". Small isolated habitats such as an aspen grove would be considered important even though they have not been identified as crucial on BLM wildlife overlays. Proposed projects within designated crucial areas may be completed when on-the-ground inspection shows an overall benefit for wildlife. For example: the seedling scheduled for Allotment 202 is in crucial deer winter range; however, the area is presently a non-type of big sagebrush and seedling would improve spring forage for deer as long as sufficient sagebrush is retained for winter food and cover.

- 12-20 The impacts of spraying 2,4-D are discussed in Chapter 3. The design features in USDI, BLM (1978e), Vegetation Management with Herbicides (cited on page 1-26 in the Ironside DEIS) include monitoring:

"Water monitoring of important streams will be done when there is a possibility that contamination may result from a proposed herbicide use" (page 1-45). "The guidelines for when to monitor water are ... 1. Water monitoring will be done when any herbicide application is in a municipal watershed. 2. Water monitoring will be done when any herbicide application is located in a fish hatchery supply watershed. 3. Water monitoring will be done when any herbicide application is in a watershed with a domestic water supply intake for drinking or irrigation less than one mile downstream from the treatment area. 4. Water monitoring will be done when a herbicide application is adjacent to a major fish bearing stream." (page 1-46, 1-49)

See response to comment 4-1 for discussion of choice of methods for brush control.

- 12-21 The proposed MFP includes proposals to exchange isolated tracts of public land for private lands within or adjacent to larger tracts of public land.

- 12-22 The unallotted lands are not located within allotment boundaries. No grazing is presently authorized on these lands. However, an application for livestock grazing would be approved or disapproved based upon the findings of an environmental assessment which would assess the impacts of livestock grazing on the various other resources. If an application were approved, the public land would probably be put under nonintensive management. One allotment, 5014 Hunt Mountain, is proposed for elimination of livestock grazing under the proposed action. Also see page 1-10, Livestock Exclusion Areas.

- 12-23 Monitoring studies are designed to measure the progress of a grazing management program in meeting allotment objectives. The objectives for each allotment are formulated to either correct unsatisfactory resource conditions or maintain or enhance satisfactory condition. These objectives both determine the type of studies to be conducted and their location. Specific objectives, however, have not yet been formulated for most allotments; consequently, the exact type or location of the studies have not been determined. Experience indicates that not all riparian areas need be monitored. Those not needing monitoring include riparian areas where present resource condition is satisfactory and no change is proposed, or riparian areas under a management system that is producing good condition in similar areas.

- 12-24 Observations, studies and inventories are continuing on a regular basis. Formal monitoring plans will be developed after a final decision has been made.

- 12-25 See response to comment 12-2.

- 12-26 None of the range improvement projects in the proposed action have been constructed. The improvements mentioned in the second paragraph under Implementation of the Proposed Action on page 1-28 in the DEIS were constructed prior to 1978.

- 12-27 The vegetation allocation for Alternative 2 would be zero for livestock and the same as the proposed action for wildlife and wild horses, as explained in footnote 1 on Table 1-11 in the DEIS.

- 12-28 Refer to corrected Table 2-1 in Errata.

- 12-29 Only riparian zones on public land were shown. Small wetlands and marshy areas associated with lakes and reservoirs are shown on Figure 2-2 with a green dot. Approximately 40 riparian acres associated with 400 springs have not been shown. Large wetlands suitable for waterfowl do not occur on public land in the EIS area.

- 12-30 Only 2 of the 11 plants identified as likely candidates for listing as endangered or threatened have been found on public lands in the EIS area. Haplopappus radiatus, which is not palatable to livestock, was found in Allotments 1001, 1006, 1044, 1045, 1063 and 3026. Lomatium oregonum was found in Allotment 5014. See response to 12-31.

- 12-31 Bureau policy concerning development of range improvements including spraying is outlined on page 1-22. This policy treats both listed and proposed species equally, requires a thorough field search during the project planning phase and thus prevents adverse impacts to any known threatened or endangered species.

- 12-32 According to ODEQ (1976a), "It is believed...that the generally high coliform populations in the basin's water-ways are associated with the irrigation return water flows rather than from either domestic animals or treated domestic waste. The impacts on water quality from fencing or treating domestic waste, and constructing reservoirs in regards to coliform contamination from livestock are discussed on page 3-22 in the DEIS.

- 12-33 Distribution maps and records of species sightings are available at the Vale and Baker District Offices. Species distribution by habitat for BLM districts is available for review at the Oregon State Office. (Published in Genter, Keith and Thomas Kucera. 1979. Wildlife of the Pacific Northwest: Occurrence and Distribution By Habitat, BLM District, and National Forest. USDA, Forest Service, Pacific Northwest Region. Portland, Oreg. Out of print.)

- 12-34 The DEIS does not make this assumption. Adverse impacts from decreased cover are stated on page 3-30. Direct and indirect impacts are discussed on page 3-24. Social avoidance of cattle and trampling mortalities have not been shown to be a significant factor in reducing wildlife populations. However, the physical presence of livestock may affect the nesting activities of birds such as horned larks. Reynolds and Frost (1980) found that even though horned larks were nesting in

an ungrazed pasture, they did not begin nesting activities in a grazed pasture until almost 2 weeks after the sheep had been moved to a different range. Cattle can be expected to have a similar impact. (Reynolds, Timothy D. and Charles H. Frost. 1980. The Response of Native Vertebrate Populations to Crested Wheatgrass Planting and Grazing by Sheep. In *Journal of Range Management* 33(2).)

- 12-35 Kit fox were not considered because they are not known to occur in the EIS area. Their range begins about 60 miles south of the EIS area and extends southward. The western spotted frog is considered sensitive only west of the Cascade Mountains. This frog is common in eastern Oregon and is not likely to become endangered. The spotted frog would be affected by impacts to riparian habitat (page 3-25). The collared lizard, leopard lizard, short horned lizard and pygmy rabbit are not presently considered sensitive by the BLM.

Species considered sensitive by BLM which occur in the EIS area include the ferruginous hawk, Swainson's hawk and the long-billed curlew. Crested wheatgrass seedlings have been found to be beneficial to raptors (page 3-34). Approximately 2,000 acres of low growing annual vegetation will be excluded from seedlings to preserve adequate curlew nesting habitat.

- 12-36 Condition and trend at each of 347 riparian zones were estimated using criteria in Table 3-7 and on page 3-25. Resulting condition and trend acreages were totaled and appear in Table 3-8.

- 12-37 Crucial winter range is found on all or part of the following allotments: 0102, 0104, 0117, 0120, 0125, 0132, 0148, 0201, 0202, 0203, 0204, 0209, 0216, 0217, 0225, 1001, 1002, 1004, 1006, 1015, 1031, 1045, 1049, 1061, 1301, 1302, 1330, 2004, 2006, 2008, 2023, 2024, 2025, 2030, 2037, 2040, 2055, 2083, 2084, 2112, 2114, 2115, 2116, 2126, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3025, 3026, 3029, 5236, 5304, 5311, 5313.

Maps showing the location of crucial deer winter range are included in the planning overlays available for review at the Vale and Baker District Offices.

- 12-38 As stated on page 1-25, important wildlife habitat would be excluded from vegetative manipulation projects unless treatment would provide direct wildlife enhancement. When feasible, forbs and browse palatable to deer would be seeded with grass. Fences would be designed to allow deer to jump over or go under. New water developments would improve summer distribution of deer. Proposed seasons of use by cattle were set to decrease forage competition. Modified rest rotation systems would decrease forage competition and increase browse production.

- 12-39 Oregon laws and regulations provide the classifications of Oregon wildlife. Wildlife is classified as game animals, protected wildlife or unprotected wildlife. As used in the DEIS, small or nongame refers to that category of unprotected wildlife not classified as game animals. Specifically, in the EIS area this includes cottontails, ground squirrels, jack rabbits and coyotes. Within the EIS area, recreational hunting occurs for these species.

- 12-40 Pages 1-25 and 3-41 discuss relationships between livestock fencing and recreation. Leasing or licensing for livestock grazing does not preclude use of the land by recreationists. However, if private land must be crossed to reach public land, then public access could be denied by the private land owner.

- 12-41 All public lands in the EIS area were examined in accordance with the visual resource inventory and evaluation procedures contained in the BLM Manuals in the 8400 series (Visual Resource Management). VRM classes specify objectives for visual quality management and allow for differing degrees of modification in the basic elements (form, line, color and texture) of landscape features. VRM Class 1 provides primarily for natural ecological changes. However, it does not preclude very limited management activity. It is applied to wilderness areas, some natural areas, wild portions of wild and scenic rivers and other similar situations where management activities are to be restricted. No such areas exist in the Baker District portion of the EIS area.

- 12-42 In March 1980, the Oregon State Director announced his proposed decision for public lands in the EIS area included in the intensive wilderness inventory. About 40,575 acres in 5 areas are proposed for inclusion in wilderness study areas. A final decision will be made on these areas in Fall 1980 following the 90-day public comment period. The intensive wilderness inventory and accompanying maps are available in the Oregon State Office. More information concerning ecologically significant areas is available in Nature Conservancy (1978) and accompanying maps. Since these maps are readily available, they were incorporated by reference, in accordance with CEQ Regulations 40 CFR Part 1502.21.

- 12-43 Reference numbers are those provided by the Oregon Natural Heritage Program (Nature Conservancy 1978). While the majority of these ecologically significant areas are unsurveyed and the elements of natural diversity unverified, the general locations of these areas, as given in Nature Conservancy (1978), were used to map the sites and analyze the impacts to them. See response to comment 12-6.

- 12-44 The alternatives are arrayed from no livestock grazing to optimize livestock grazing so that the impact analysis would cover all levels of grazing use and range improvements. The decisionmakers have the option of choosing any level of use or number of range improvements within the range of alternatives analyzed.

- 12-45 Seeding mixtures will be determined on a site-specific basis (see page 1-26 in the DEIS). Generally, both forbs and grasses would be seeded with the specific species dependent on the rainfall; some each seeding is in, as well as other factors. Some browse species may also be seeded. Some common species that have been seeded in the past in the EIS area are orchard grass, intermediate wheatgrass, nonad alfalfa and clover.
- 12-46 Past experience indicates most seeded areas, if properly managed, can be maintained for 15 to 30 years without further land treatment.
- 12-47 Table 3-7 lists the acres of livestock exclusion in riparian zones for the proposal and alternatives. Alternative 2 eliminates all livestock grazing from public lands; Alternative 5 excludes livestock grazing from all riparian areas. Table 1-6 indicates existing and proposed livestock exclusion acreages for each allotment.
- 12-48 Transparent mylar overlays depicting the URA information have been prepared and are available for public review in the district offices.
- 12-49 Economic analysis of the range improvements was not feasible in the absence of specific information on their benefits. Each range improvement will require justification by cost-benefit analysis prior to construction funding. See response to comment 12-52.
- 12-50 The data requested are found in the Baker Resource Area Unit Resource Analysis (URA) and the Northern Malheur Resource Area URA. Overlays and narratives are available at the Baker and Vale District Offices. Current literature, BLM inventories, URAs and the Oregon Department of Fish and Wildlife were consulted prior to estimating impacts. In accordance with GSA regulations (40 CFR part 1502-2), some material is incorporated by reference and not included since it is otherwise available to the public.
- 12-51 Under the proposed action, livestock would be grazing 107,020 ADUs. If 40 pounds of weight were gained per ADU, beef production would be 4,280,800 pounds per year. About 50 percent of the 4,280,800 pounds of weight gain would convert to useable meat. The remainder would include carcass weight, etc. Therefore, red meat available for consumption would be approximately 2,140,400 pounds. This would amount to about 0.057 percent of the total U.S. commercial beef production (37.22 billion pounds) in 1979. Using the above methodology, approximately 4.7 percent of the country's beef is raised on public land (8,717,502 ADUs actual use in 1976).
- 12-52 The Baker and Vale Districts have estimated, for future budget purposes, the cost of constructing the range improvements to be approximately \$2.75 million. This includes the money necessary for survey and design and development work. The money to construct the improvements would come from Congressionally-appropriated funds and the 50 percent of grazing fees authorized under the Federal Land Policy and Management Act for range improvement work. In the EIS area, approximately \$214,600 in grazing fees were paid in 1978.

It is BLM policy to do the benefit-cost analysis at the AMF development stage, which will follow the EIS. The range improvements are not yet site specific; it is unknown what all the costs and benefits would be at this time. Some of the improvements may not be constructed if other constraints apply after on-the-ground analysis (see design elements on pages 1-22 through 1-26 in the DEIS).

- 12-53 Impacts of the proposed action and alternatives were summarized in Table 1-10 of the DEIS.
- 12-54 (1) No formal allocation of livestock forage to wildlife is necessary because the livestock allocation has been reduced 253 ADUs due to steepness of slope. Competition between deer, elk and livestock is not believed to be significant in this allotment. Also see response to comment 12-10.
(2) and (3) The fence would exclude livestock from approximately 2 miles of Deer Creek in order to improve riparian vegetation.
(4) The exact cost of the improvements by allotment are unknown at this time. See response to comment 12-52.
(5) Limited funding allowed only a portion of the streams in the EIS area to be surveyed. Vegetation within the enclosure will be compared to adjacent grazed areas in order to monitor improvement.
(6) See Appendix D in the DEIS for existing condition and trend by allotment.
- 12-55 (1) See response to comment 12-54 (1).
(2) The ecologically significant section of the Burnt River is farther downriver.
(3) and (4) See response to comments 12-18 and 12-50.
(5) Riparian vegetation along 1.2 miles of the Burnt River is in good condition because irrigation ditches make it inaccessible to livestock. Water quality for fish is poor due to irrigation return waters. BLM has no control over agricultural practices.
(7) See pages 3-30 and 3-34 in the DEIS.
(9) and (10) The number of cattle on this allotment is dependent on the time of year and length of time they are on the range. See response to comment 12-18.
(11) See response to comment 12-54 (6).
- 12-56 (1) The elk winter range is outside of the treatment area.
(2), (4), (6) Impacts to deer winter range were discussed on pages 3-30 and 3-31 of the DEIS. See response to comment 12-38 and 12-19.
(3), (5) Seedings have generally been found to be beneficial to antelope. See page 2-23 of DEIS.

Rt. 1 Box 555
Ontario, Or 97914
June 23, 1980

Oregon State Director (911.1)
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Sir:

As a result of further study of the Draft Ironside Grazing Management Environmental Impact Statement, I wish to make additional comments beyond the oral testimony presented in Ontario on June 3, 1980. A copy of the basic text of the oral comments is enclosed. As a permittee on the North Harper Allotment, No. 402, I wish to comment first on several items which are of a general nature in the draft statement.

Data reported in the Draft EIS was collected in 1976 and compiled in 1977. Interim Allotment Agreements were instituted in 1978 on over 20 allotments in the Vale District. These agreements provided for the collection of Actual Use and Utilization Data by pasture for each allotment. Currently, there are two years data available which shows the adjustments indicated in the 1976 data and reported in the statement are inaccurate. I believe the final statement should show the new data, and adjustments if needed should be based on it, rather than the older inaccurate information.

The Interim Allotment Agreements also outlined the grazing system, maximum utilization goals, and the key species for the utilization studies. Several allotments in the drier, lower elevation areas of the Vale District established some pastures with Cheatgrass as the key species. These pastures have little Bluebunch Wheatgrass present and are in the early ecotone condition class. Range management authorities from Oregon State University say there are two ways to manage such pastures: (1) Manage as Cheatgrass pastures or (2) Seed to Crested Wheatgrass. Management alone, even total rest, will not improve the density of Bluebunch Wheatgrass or improve the ecotone condition class. Thus, the final statement should be changed to reflect the precedent established in the Interim Allotment Agreements, which recognized Cheatgrass as a key species and outline grazing systems for its management.

Rest rotation grazing systems are advocated in the Draft EIS. Past experience indicates some problems with this grazing system; such as the development of "wolf" plants in Crested Wheatgrass. Deferred rotation grazing accomplishes many of the same goals without the problems of rest rotation. Added emphasis should be placed on deferred rotation grazing in the final statement.

A serious shortcoming of the EIS is its sole concern with the effects of grazing management. Other areas of multiple use, such as Off Road Vehicle Parks, cause a much greater impact on the environment and natural resources than grazing. The problems outlined in my oral comments regarding ORV use should be analyzed and answered in the same way the Draft EIS does grazing management.

Of special interest in the North Harper Allotment is one of the largest Livestock Exclusion Areas in the Ironside area. Local BLM personnel say there is no specific reason for excluding this area. Its past history probably explains its exclusion as it was once fenced in with bordering private land. About ten years ago, BLM realized there was no permit for it, so it was fenced away from the private land but the fence separating this parcel from other public land in the North Harper Allotment was never removed. Opening this exclusion would provide more multiple use of the area, but water would need to be developed for livestock grazing.

These comments should be considered and answered in the Final Environmental Impact Statement. Their inclusion would greatly improve the adequacy of the statement and its implementation.

Sincerely,

Harry L. Smith

Harry L. Smith

Enclosure

Copies sent to:
Rep. Al Ullman
Sen. Mark Hatfield
Sen. Bob Packwood

Response to comments in Letter 13

13-1 See response to comment 5-4.

13-2 The Bureau recognizes that cheatgrass has livestock forage value; however, it is not Bureau policy to manage for an annual grass species on sites capable of producing perennial species.

13-3 It is recognized that there are problems with rest rotation grazing. If other grazing systems will meet resource objectives, they will be considered in the decision document.

13-4 It is not the purpose of the EIS to analyze all the proposed landuse allocations in the MPP, just those that relate to livestock grazing (see page 1, Purpose and Need in the DEIS). See response to comment 18-5.

13-5 Alternative 4 provides for grazing of livestock exclusion areas 1 out of 3 years.

Oregon State Director (911.1)
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear BLM,

The Ironside Grazing Management Environmental Impact Statement is pretty cohesive but lacks some very fundamental information. First of all, there is no mention of what effect the non-native vegetation will have on the respective ecosystems. I'm referring to the proposal to seed 24,593 acres to crested wheatgrass. These seedlings might be monocultures (50-90% crested wheatgrass, page 3-13) which may impact the animal life in the area. There is discussion on what effect the seeding will have on the plant life of the area but nothing is said on the impacts of animal life. And something that important should be found in an Environmental Impact Statement.

14-1

14-2

14-3

There is no discussion or map on critical winter or summer range for big game. The general soils maps (figures 2-4a and 2-4b) are not soils maps at all but rather geology maps. A soils map should be included within the statement and not kept in the Baker district office as was mentioned during the June 4th hearing in Baker. One of the purposes of preparing impact statements is to collect all the data into one document and not have the material scattered around town.

14-4

Is there any discussion on managing the feral horses found in the affective area? Should not there be debate on how to eliminate these exotic, non-indigenous animals from the already over-abused rangeland?

14-5

On page xvii is the statement that range improvements would destroy sage grouse habitat while on page 1-25 it says that wildlife habitat would be excluded from vegetative manipulation projects (read range improvements). Why the contrary statements? Is the BLM trying to please or offend everyone who reads the EIS? Also, what exactly is important wildlife habitat? Who will decide what gets disturbed and where?

14-6

On Table 2-3 the BLM has listed plants which are likely(?) candidates for federal listing by the U.S. Fish and Wildlife Service. It was my understanding that those plants are listed as threatened or endangered by the USF&WS. In addition, the table does not include *Claytonia megarhiza* nor *Hackelia hispida* both of which are listed as threatened or endangered and found in the Ironside unit.

14-7

Sharp-tailed grouse, which are thought to occur in the area, were not mentioned in the discussion of upland game bird on page 2-24. Lastly, I feel a discussion on closing and rehabilitating roads to increase forage production should be included within the statement.

Cordially,
Kent Coe
Kent Coe

Response to comments in letter 14

- 14-1 Impacts of seedings on animals are discussed on pages 3-30, 3-34 and 3-35 of the DEIS.
- 14-2 Crucial deer winter range is described in response to comment 12-37.
- 14-3 Due to the large number of soil units found in the EIS area (86 described in Appendix H, Properties, Qualities and Acreages of the Soils in the Ironside EIS Area), the units were grouped in Appendix I, Soil Units Shown on Figure 2-4, General Soils in order to present a legible map. The groupings on Figure 2-4 are impact oriented; soils that react similarly to an impact agent are grouped together. All detailed resource information was collected and presented in the Unit Resource Analysis (URA) and was used in preparing the proposed Management Framework Plan (MFP). These documents were used in preparing the EIS, and are available for public review in the district offices.
- 14-4 A herd management plan has been developed for the Hog Creek wild horse herd and is available for public review in the Vale District Office.
- The management of wild horses is established by Public Law 92-195. It is illegal under this law to eliminate all wild horses.
- 14-5 See response to comment 12-6.
- 14-6 There are no plants found in the EIS area presently listed as either threatened or endangered under authority of the Endangered Species Act. The plants listed on Table 2-3 are the only species that have either been found or are suspected to be in the EIS area that will be on the U.S. Fish and Wildlife Service Notice of Review List. All official listings are expected to come from this list. Both *Hackelia hispida* and *Claytonia negarizica*, which appeared on earlier proposed lists, will be recommended by the U.S. Fish and Wildlife Service for deletion from further consideration.
- 14-7 Little Lookout Mountain may contain the last remnant population of sharp-tailed grouse in Baker County. No recent sightings have been made. Proposed grazing would not affect habitat significantly because there is little public land in the suspected grouse area.

As concerned citizens of the State of Oregon, we are compelled to respond to the Bureau of Land Management Environmental Impact Statement. We take exception to the BLM position of decreasing forage availability. We believe that since the 1930's great strides have been made to improve range conditions. Nevertheless, we acknowledge that further improvements are needed in the 1980's on both BLM and private ranges to support populations of wildlife and livestock. We have identified two critical areas for comment.

Since livestock grazing offers the only practical vegetative management tool; we reject the data used to set forage production levels listed in the Draft Ironside E.I.S.

Since this study was made, more accurate information has been collected and is available. Because of the long range effects the draft E.I.S. will have on the multiple use users of the federal lands involved, we feel this current information should be used in setting forage production levels for these lands.

A general lack of understanding is experienced after reviewing the economic data presented in the Draft E.I.S. It is difficult to determine from the review of information the actual value gained or losses from the proposed actions. The validity of the economic data is also questioned in part based on: (1) the duration of time allowed to users and BLM personnel in the Vale District to respond to economic data collection requests. (2) The minimal number of users responding to request for economic impact information. (3) The lack of information and minimal effect shown to the local business community in view of grazing reductions. Therefore, more in depth surveys and information should be collected to determine the serious economic losses that will be experienced by both the ranching and business community if grazing reductions are initiated.

Since the BLM has not effectively presented adequate data to justify decreases in forage allotment and in view of the serious economic consequences in their proposal, we are convinced that the range practices used effectively during the past 3 decades should be maintained. When reliable information is obtained in the future by the BLM, we are committed to improving the forage conditions for wildlife and livestock.

By increasing red meat production whether from game or livestock, the protein needs of man can be met. From all estimates of population growth and food competition between man and animal, the range represents the single best alternative to meet the protein needs of the future. We are convinced that our recommendations represent the most responsible avenue presently known.

We the undersigned support this position.

| NAME | ADDRESS | ALLOCATION NUMBER |
|-------------------|-----------------|-------------------|
| Raymond Findley | Ontario, Oregon | 402 |
| Mattie Hayes | Ontario, Ore. | 402 |
| Willie Hayes | Ontario, Ore. | 402 |
| Lois & Zephie | Ontario, Ore. | 402 |
| Deed & Hal Depata | Ontario, Oregon | 101 |



Department of Fish and Wildlife
OFFICE OF THE DIRECTOR

506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

June 25, 1980

Mr. William G. Leavell
 Oregon State Director (911.1)
 Bureau of Land Management
 P. O. Box 2965
 Portland, Oregon 97208

Dear Bill:

The Oregon Department of Fish and Wildlife has reviewed the Ironside Grazing Management Environmental Impact Statement. We understand that the purpose of this statement is to identify probable environmental impacts and assure that these impacts are considered in the decision making process. We also understand that the decision making process will be based on another document which will utilize the Management Framework Plan, neither of which has been completed or is available for review.

The Department's response to this Environmental Statement is in three segments. In the first section our comments deal with the EIS in general. The second section addresses concerns raised by the proposed management action and other alternatives. The response is concluded with a list of suggested recommendations.

Forage Allocation

Vegetative manipulation (i.e., plowing, burning, and spraying) may reduce food for deer (page 3-30). The proposed development of new water sources would allow livestock to use previously unavailable forage in unquantified amounts (page 3-12). These range improvement practices would increase available livestock forage, while reducing available wildlife forage and cover (e.g., vegetative manipulation), or would increase livestock competition with wildlife for existing forage (e.g., new water developments).

The EIS states that deer numbers in most of the area are at the Department of Fish and Wildlife objectives. This is true. However, these herd size objectives were based on available forage. If available forage increases in the future, it follows that Department objectives could be adjusted upward, allowing deer numbers to increase to take advantage of increased forage.

Riparian Vegetation

Studies have documented the significance of riparian habitat to all types of wildlife (e.g., Winegar, 1977; Thomas, Maser and Rodiek, 1977; and Oliver and Bennet, 1966). In Northeastern Oregon approximately 80 percent of the terrestrial wildlife species are either directly dependent on riparian habitat, or utilize it proportionately more than any other habitat type.

Response to comments in Letter 15

15-1 See response to comment 5-4.

15-2 The text portions dealing with economic matters have been revised in an attempt to clarify their content. The economic analyses are based on data considered to be reasonably representative of the affected conditions, and the best information available.

C-40

Mr. William G. Leavelle
June 25, 1980
Page 2

In 1979, the BLM Regional Director endorsed the procedures in "Managing Ecosystems for Fish and Wildlife in Eastern Oregon and Eastern Washington", as prepared by an interagency wildlife committee. This endorsement also included the statement that: "special attention for these riparian areas of critical wildlife habitat is long overdue".

The benefits listed in the EIS from improved riparian vegetation are significant (page 3-36). Riparian vegetation stabilizes streambanks, reduces silt loads, decreases flooding, increases summer flows, reduces water temperatures, and generally improves habitat for terrestrial and aquatic life. Improved riparian habitat would also mean additional thermal cover and forage on deer winter range, where current conditions range from fair to poor (page 2-23).

The EIS points out that fencing riparian areas can have disadvantages, specifically increased deer-fence mortalities (page XVI). However, the statement also indicates that fence to be built primarily on upland sites is not expected to have significant impact (page 3-30). The existing 1200 miles of fence on lands within the EIS area have also not had a significant adverse impact on big game (page 3-30). The EIS should clarify why fencing of riparian areas will result in "increased deer-fence mortalities", while existing and proposed upland fences have no significant effect.

Upland Game Birds

The EIS states that mountain quail are found primarily in woodland ecotones (page 2-24). Department field surveys indicate that mountain quail formerly were associated with riparian habitats in grassland and shrubland ecotones within the EIS area. Restoration of riparian habitat should allow this species to expand into its former range if a nucleus population remains.

Sagebrush Control

Proper planning and coordination with other agencies before initiating sagebrush control can result in an acceptable range management procedure. However, large spray projects could result in a critical cover deficit and habitat destruction for many types of wildlife. The statement that "removal of sagebrush on approximately 50,000 acres would allow for improved antelope movement" (page 3-30) is not valid justification for brush control.

We understand that the Management Framework Plan specifies sagebrush spraying will not occur on crucial wildlife ranges such as critical deer wintering areas and key sage grouse habitat. We support protection of these sensitive areas.

Juniper Control

With only 11 percent of the entire EIS area classified as shrubland, woodland and brushland, trees are of high value to wildlife. The EIS states that winter ranges within the area are poor for deer, primarily because dense

Mr. William G. Leavelle
June 25, 1980
Page 3

- 16-6 thermal cover is lacking (page 2-23). Thinning or clearing of juniper on deer winter range could have detrimental effects on wintering animals. The lack of adequate thermal cover requires wintering animals to utilize more of their fat reserve to maintain body temperature. The necessity to expend added energy can result in reduced survival during periods of severe winter weather.

Water Development

The EIS includes a discussion on the development of springs for livestock water sources. The EIS states "the water that has previously supported small areas of riparian vegetation would be diverted to livestock water troughs. In some cases, this loss of water would cause the riparian vegetation to die. Fencing would protect any remaining riparian vegetation at spring sources and would allow growth of new riparian vegetation on the overflow areas." If riparian vegetation is protected at the spring source, as well as the overflow area, the impacts on wildlife would be negligible. The Department supports these protective measures, since loss of small patches of riparian vegetation can have impacts on wildlife far in excess of that indicated by the size of the lost riparian area.

Late Livestock Grazing

We understand that the Framework Management Plan states no cattle grazing will be allowed beyond October on crucial winter ranges. Where ranges are crucial for winter wildlife use, restoration of browse and fall regrowth for wildlife use is essential. On ranges that are winter wildlife ranges, but that are not determined to be crucial, livestock use can be allowed after October 1, providing wildlife forage needs are met.

16-7

The Department considers the Keating area to be crucial deer winter range. If cattle were grazed in this area in the late fall or winter, very little of the fall forage regrowth would be left for wildlife. However, it is our understanding that the Framework Management Plan specifically states that fall livestock grazing will not occur on the critical Keating deer winter range after September 30.

Economic Conditions

Increased competition between livestock and wildlife for forage, and reductions in thermal cover and browse, as indicated in the EIS, could reduce deer populations. The EIS, however, states hunting and fishing use will increase to 1990 (page 3-53). The amount of recreation is directly influenced by the quality of the experience, which depends on success rates, the quality of the game, and the regulatory restrictions which relate to resource availability. We would expect decreased forage and cover for wildlife to result in a reduction in recreation, rather than an increase.

16-8

- 16-9 In table 3-22 (page 3-59) the local personal income related to hunting and fishing appears to be greatest under the optimize livestock alternative

- 16-9 (Alternative 4). It would appear that maximizing livestock production would reduce fish and wildlife and potential recreation. The EIS should explain how the income values related to hunting and fishing were computed for all alternatives.

The following comments summarize Department concerns about the proposed action and/or the alternatives presented in the EIS.

Forage Allocation

- 16-10 The proposed action allocates 107,020 AUMs of existing forage to livestock and 7,619 AUMs to wildlife. The objective of the plan is to increase this annual forage production by 36,281 AUMs over the ten year period following full implementation. All increased forage production would be allocated to livestock. We recognize that forage on slopes exceeding 50 percent are not allocated to livestock and therefore could be utilized by wildlife. However, most of the crucial big game winter range within the EIS area is not situated in areas with steep slopes. Mule deer populations are generally at Department objective levels for most of the EIS area, but it is questionable whether adequate forage is currently available to carry deer in good condition on crucial wintering areas in severe winters. The Department suggests that to be in keeping with the multiple-use concept, an equitable percentage of increased forage production be allocated to wildlife, especially on crucial winter range.

Riparian Vegetation

- 16-11 The proposed action in the EIS calls for protection of 5.5 to 34 miles of stream (riparian) area depending upon which section of the EIS is consulted (page 3-22 or 3-36). Fish production would remain below potential on 33.7 miles of stream due to livestock grazing (page 3-39) and 271 miles of streambank would continue to erode (page 3-19). Considering the requirements of the Federal Land Management Policy Act, the National Clean Water Act - Section 208, and the National Environmental Protection Act, the Department requests that action be taken to protect additional riparian areas.

Sagebrush Control

The proposed action calls for the control of sagebrush on tracts totalling up to 64,309 acres (page 3-22). We understand that the Management Framework Plan specifies sagebrush spraying will not occur on crucial wildlife ranges, such as critical deer wintering areas and key sage grouse habitat. The Department wishes to emphasize the importance of this protective action, including the location of sensitive species and habitats.

Juniper Control

- 16-12 The proposal to thin or clear 520 acres of juniper in the Durkee area (page 3-13) could have significant impact on wintering deer. Juniper control may not be justifiable, considering potential impacts on this crucial deer winter range.

The Department suggests that in addition to retaining juniper stands, winter range improvements, including the planting of trees, shrubs and brush are needed to provide additional browse and cover in these sensitive areas.

Single Special Seeding

The proposed action states (page 1-26) that on rangeland seeding projects, single species seedings would be avoided. However, on page 3-13, the text indicates that, based on existing seedings, crested wheatgrass would comprise 50 to 90 percent of the total composition. The proposed action calls for the seeding of crested wheatgrass and depending on the site characteristics, other herbaceous species on a total of 24,593 acres. Considering the acreage proposed for seeding, the Department stresses the importance of a variety of species in all seeding areas to provide ground cover for protection of soil and water as well as wildlife food.

The BLM has indicated (page 1-26) that seeding mixtures would be determined on a site specific basis, using past experience and recommendations of the Oregon State Extension Service and Experiment Stations. We request that our local habitat biologists also be consulted during the seed mixture selection process. We would at least suggest that each seed mixture include a browse species and a nitrogen fixer, such as monard alfalfa.

Late Livestock Grazing

- 16-13 The EIS proposed action states: Rest rotation and deferred rotation grazing would result in significant competition between deer and livestock for fall "green-up" in allotments near Keating. The Department recognizes that a problem currently exists on the crucial Keating deer winter range where late fall livestock grazing is occurring. We suggest that a coordinated planning effort be initiated with participation of private landowners and state and federal agencies to solve this problem.

Destruction of Sage Grouse Habitat

- 16-14 Present sage grouse populations within the EIS area are very low and no hunting season exists. The Department of Fish and Wildlife objective is to maintain a viable population within the resource area. We understand the Management Framework Plan would protect sage grouse habitat by not allowing surface disturbing activities such as roads, plowing, and spraying within (a) A two mile radius of sage grouse strutting grounds, (b) brood rearing areas, especially wet meadows, (c) within 100 yards of living sage near wet meadows and drainages, and (d) within water concentration areas. However, the proposed action and alternative 3 and 4 would destroy sage grouse habitat in at least one site (BA-31:Unnamed). The Department questions whether this action can be justified, considering the current status of sage grouse within the EIS area.

Alternative 5

Alternative 5, which optimizes wildlife, wild horses, and nonconsumptive uses, would require approximately 700 miles of new fence to protect riparian areas.

Mr. William G. Leavell
June 25, 1980
Page 6

16-15

The apparent choice is protect all riparian areas by implementation of Alternative 5, or protect almost no riparian habitat by selecting the proposed action. The Department suggests a more moderate approach that would include fencing of the watercourses showing the best potential for recovery and beneficial impacts. We request the opportunity to meet and identify sites.

Department Recommendations

Forage Allocation

1. Allocate sufficient forage to meet Oregon Department of Fish and Wildlife management objectives for big game, especially on winter range.
2. Allocate an equitable percentage of increased forage to wildlife.

Riparian Vegetation

1. Place added emphasis on protection and/or restoration of riparian areas. The loss of forage resulting from fencing of watercourses could be at least partially offset by better livestock utilization of upland forage.

Sagebrush Control

1. Sagebrush control projects should be closely coordinated with Department personnel during the planning and implementation phases.
2. The sagebrush spraying program described as part of the proposed action should be reduced, especially in areas identified as important sage grouse habitat, or in areas where big game thermal cover has been reduced on winter range.

Juniper Control

1. Juniper clearing or thinning should not occur on crucial deer winter range.
2. Range improvements, including the planting of trees, shrubs and brush should be initiated to provide needed browse and thermal cover on winter range.

Single Species Seeding

1. Rangeland seedlings should include a variety of species to provide ground cover, soil and water protection, as well as wildlife forage. Seeding mixtures should be selected after consultation with Department personnel.

Mr. William G. Leavell
June 25, 1980
Page 7

New Spring Developments

1. Overflow areas at new water developments should be protected from livestock in a manner comparable to that provided the water source.

Late Grazing by Livestock

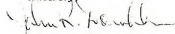
1. Where ranges are crucial for winter wildlife use, browse and fall regrowth should be reserved for wildlife.
2. A coordinated plan should be developed among the BLM, ODFW, Forest Service and private landowners for managing range, soil and wildlife resources in the Keating area.

CONCLUSION

The Ironside Grazing Management Environmental Impact Statement does not appear to adequately address the multiple use concept, but the Department understands these concepts will be more adequately addressed in the proposed action document (the Management Framework Plan) and in individual on-site project analyses. We understandably have difficulty in assessing a proposed action and its impacts when we do not have the complete action plan in front of us.

We request an early opportunity to review this action plan and provide additional comments and recommendations. We also ask that the suggestions in this review be made part of the proposed action plan. Finally, we ask for close and continuing involvement between your office and our field staff in preparing analyses and plans to implement the proposed actions.

Sincerely,


John R. Donaldson, PhD
Director

jnp

cc: Bob Thompson
Bob Stein
Warren Aney
Duane West
Dick Humphreys/Gerry Grover
Vic Masson/Bill Hosford
Bill Olson

C-43

Response to comments in Letter 16

- 16-1 The EIS utilizes the proposed Management Framework Plans (MFP). See Appendix A in the DEIS for a brief summary. The proposed MFPs are available for review in the Vale and Baker District Offices, respectively.

The decisionmaking process that follows issuance of this Final EIS will culminate in issuance of a Rangeland Management Program Decision Document in the spring of 1981. A draft of that document will be released for public review and comment before the decision is final.

- 16-2 The statement on page 1-2, "For the purposes of impact analysis, all increased forage production will be allocated to livestock", was an assumption made for impact analysis as stated. The decision which will follow this EIS will not allocate future forage production. At the time additional forage becomes available, all other affected resource values would be considered prior to making any allocation.

- 16-3 See response to comment 12-5.

- 16-4 At least four small populations are presently found in the EIS area. Most of the quail habitat is proposed for rest rotation grazing which is expected to result in slow improvement of riparian vegetation. Significant improvement to allow for expansion of habitat is not expected. Impacts would be similar to those described for upland game birds, page 3-31 of the DEIS.

- 16-5 Spraying and subsequent seeding are proposed primarily to improve forage for livestock. Improved movement for antelope would also result, but is not the reason for the brush control.

- 16-6 Large scale removal of mature juniper is not planned. The design features for juniper control are listed on page 1-25. ODOW biologists would be consulted in the planning and final layout of vegetative manipulation projects to ensure that the needs of wintering animals are considered.

- 16-7 The proposed MFP recommends that fall grazing after September 30 not be allowed in the Powder Canyon Pasture of Allotment 2024. Large numbers of deer often concentrate in this during the winter. The fall "green up" of grasses on this area would be totally available to deer. Additional pastures would be considered for September 30 deferment when heavy deer use is documented. As stated on page 3-29 of the DEIS, rest rotation and deferred rotation grazing would result in cattle use during November and December on approximately 3,000 acres of the Keating deer winter range. Large numbers of deer do not concentrate in these pastures; consequently, relatively few deer would be affected by forage competition.

- 16-8 Big game hunting use under Alternative 1 (continuation of the existing situation) is projected to increase to 70,610 visits attributable to public land. This assumes an increase in use relative to a 25 percent growth in the population of the State from 1974 to 1990 (Portland State University 1976). Under the proposed action, recreational visitation is projected to increase to 1990. However, due to decreased forage and cover, increases projected for big game hunting use (67,100 visits/year attributable to public land) would not be as great as would be expected under Alternative 1.

- 16-9 Table 3-22 has been changed (See Errata, page E-28) to reflect a loss in annual personal income under Alternative 4 (also illustrated in Table 3-21). The revised economic section (page E-26) explains in greater detail how community economic impacts stemming from changes in hunting and fishing use were derived.

- 16-10 The severity of a winter could be measured by several factors i.e., length of winter, temperatures, snow depth, etc. The impact of these factors upon deer numbers cannot be reduced solely by having forage in place. For example, adequate forage may be available, but due to deep snows becomes unavailable; or dietary needs may be fulfilled, but extended low temperatures may cause animal stress or mortality regardless of how much forage is available. Therefore, an allocation of forage for the average season and herd numbers was considered to be the most appropriate base for determining deer forage allocations.

- 16-11 Table 1-4 states that 34 miles of streams would be excluded from livestock grazing. The 3.5 miles stated on page 3-36 in the DEIS is incorrect, and should be 6.1 miles. See errata for page 3-36. Only 14.9 of the 34.2 miles of streams to be excluded provide fish habitat, and 6.2 miles proposed for exclusion would have no impact on fish habitat (see Table 3-10).

- 16-12 See response to comment 16-6.

- 16-13 See response to comment 9-9.

- 16-14 See response to comment 12-6

- 16-15 The decisionmakers have the option of choosing any level of riparian protection that falls within the range of alternatives analyzed (from No Action in Alternative 1 to total protection in Alternatives 2 and 5).

U.S. ENVIRONMENTAL PROTECTION AGENCY

17



REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO
ATTN OF: M/S 443

25 JUN 1980

Frank A. Edwards, Acting State Director
Bureau of Land Management
Oregon State Office
P. O. Box 2965
Portland, Oregon 97208

Dear Mr. Edwards:

The Environmental Protection Agency (EPA) has completed its review of your draft environmental statement for the Ironside Grazing Management Plan. Time has permitted only a brief review, so our comments are necessarily general in nature. We have been impressed by the completeness and detail of BLM's grazing EISs, and we generally support the resource protection measures proposed.

The 1978 Oregon Statewide Assessment of nonpoint source water quality problems shows that portions of the Malheur River and its tributaries, especially Willow and Bully Creeks, have severe problems of sedimentation, elevated temperature, and streambank erosion. To a significant degree, these problems can be attributed to destruction of streamside vegetation by livestock trampling. The proposed action will improve water quality by reducing grazing on steep slopes and restricting access to riparian areas. This will increase vegetative cover and reduce erosion. EPA strongly supports these management actions.

We note that Alternative 5 produces more environmentally preferable results due to more extensive livestock exclusion from riparian areas. We note from page 1-44 that this greater exclusion would cause a reduction of only 905 AUMs from the 107,020 AUMs available to livestock under the preferred alternative. This appears to be a minor economic tradeoff to obtain very significant environmental benefits. We therefore encourage you to seriously consider a greater extent of livestock exclusion from riparian areas, especially where water quality, and riparian and aquatic habitat improvements would be greatest, and where conflicts with large wildlife species would be least.

2

The labels of herbicide products containing 2,4-D generally require that the herbicide be kept out of water. BLM is responsible for taking actions necessary to follow this requirement. Careful monitoring should be used to determine if buffer strip widths are adequate and corrective measures should be taken where necessary.

The Environmental Protection Agency has rated this draft statement LO-1 (LO - Lack of Objections; 1 - Adequate Information). This rating will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act, as amended.

Thank you for the opportunity to review this environmental statement. If you have questions or would like to discuss these comments, please feel free to contact me or Craig Partridge of my staff at (206) 442-4011 or (FIS) 399-4011.

Sincerely,

Elizabeth Corbyn

Elizabeth Corbyn, Chief
Environmental Evaluation Branch

C-45

At 2
Huntington, Oregon 97907
June 27, 1980

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

The Ironside EIS draft is an evil and negative document. It should be called the Ironsidegate; equal to Watergate. This covers up and conceals vital information by omission and suppression.

- 18-1 Why have the utilization studies which were done these past two years by the BLM not been entered into this draft? Is it because these studies show an utilization of 30% and an upward trend in forage? The fact is the rancher should be receiving an increase in A.U.M.'s instead of a reduction.

- In the summary it states that "The existing forage production of 127,216 AUM's would be allocated: to livestock 107,020 AUM's, wildlife 7,619 AUM's, wild horses 600 AUM's and nonconsumptive use 11,977 AUM's; the allocation to livestock constitutes a 25% reduction from the 1978 authorized livestock use of 142,118 AUM's."
- 18-2 This statement does not mention the voluntary non-use taken that year of 17-20%, which distorts the 25% reduction figure.

- 18-3 In Table 1-2, the heading present livestock active use AUM's; doesn't show the full Class 1 license AUM's for each allotment. It already represents the 17-20% out taken in 1978.

- 18-4 Furthermore there is no mention of cuts taken by permittees in the 1950's and 60's and of the numbers of AUM's in suspended non-use already. This should be shown in the table and summary.

- 18-5 The livestock exclusion areas or riparian areas proposed management include approximately 700 miles of fence at least the cost of \$1,400,000. This \$1,400,000 would be better used to develop water away from these riparian areas. This would spread cattle away from these sites and increase vegetation in them. Fencing these areas would compound forage use outside these areas causing more soil disturbance and erosion.

- 18-6 There also is no mention of off road vehicle use in this EIS. What of the vegetation disturbance caused by ORV's? What about erosion and detritus caused by ORV's? In both maps 99% of BLM is under intensive management and ORV have no place in this type of management.

Page 2
Oregon State Director, BLM
Portland, Oregon

- 18-7 In the economic data there should be a total evaluation of costs of running cattle on the BLM. What of cattle theft, an area not mentioned to its full extent. Out of 135 head of calves in 1979, four did not come home. These calves were over 14 months old, well in health, having all calfhood vaccination shots possible. This very spring of 1980, June 2, I lost 2 calves to a hit and run butcher. This hasn't addressed a cow loss of 5 head in 1979, 3 head in 1978. These figures are above and beyond the normal death loss during calving and natural death in the herd (no carcasses were found).

There is a section of the EIS that was never addressed and this should be titled "The psychological effects on public thinking in relation to cattle operators on public range."

As an operator I meet a number of these people on the range and in the towns. Who, in all sincerity, believe that the cattlemen has the least amount of reason to be on the range. These people believe his cattle are ruining the country and that all he (the cattlemen) does is sit back and count his money. These people resent the cattlemen, believing they have the right to take his cattle if they wish, shoot up signs, ruin gates, neglect to shut gates and in general seem to have little or no respect for anyone who makes his living on the range.

I believe that only further malice between the rancher and the public will come about due to the inaccurate statements on forage utilization, through the neglect to include them in the EIS.

The BLM needs to address the EIS with ALL the available information on hand. Utilization studies done by the BLM in the past two years and to rewrite the economic loss to the area. The economic loss to the area will be far greater than believed, and stated.

I, as a rancher and citizen want a true and accurate Ironside Grazing Management Environmental Impact Statement.

Sincerely,

Charles A. Holtz
Charles A. Holtz

Allotment 101 Alkali Spring
157 Striped Ktn

continued on page 2

Response to comments in letter 18

18-1 See response to comment 5-4.

18-2 The temporary non-use that was taken pending final determination of stocking rates is shown on Table 1-3 for the Vale District. These reductions in livestock use (13,903 AUMs) were accepted through voluntary agreements between BLM and the permittees. One of the conditions was that the agreements would remain in effect until an Allotment Management Plan (AMP) is implemented (See errata for page 1-2).

Any reductions called for in the decisions that will be set forth in the Rangeland Management Program Decision Documents or the decisions that would implement AMPs would be made from Class I preference, not the present active livestock use shown on Table 1-2 in the DEIS. These reductions would be identified as suspended non-use as required by 43 CFR 4110.3-2(b).

18-3 The EIS analyzes the impacts of the proposed action and alternatives as compared to the existing situation. The existing situation for the Ironside EIS is based upon 1978 data, as writing of the EIS began in 1979.

The existing livestock grazing for 1978 is shown in Table 1-2. The column titled "Present Livestock Active Use" which consists of present active use is generally less than Class I preference because of past reductions in livestock use. However, it is not appropriate to analyze impacts of reductions which occurred over the past 10-15 years. Therefore, there is no need for the EIS to list the Class I preference, which is not affected by the proposed action or any of the alternatives. See response to 18-2.

18-4 The active livestock AUMs shown on Table 1-2 reflect present conditions and are the result of previous reductions. Following the earlier grazing use adjustments made in the Baker District in the mid-1960's, many allotment boundary adjustments, land exchanges, combinations of allotments and other administrative adjustments occurred. As a result, a meaningful comparison between the present active use and grazing use prior to these adjustments would be impossible.

18-5 See response to comment 5-6.

18-6 ORV use is referred to on page 2-28 of the DEIS, and the impacts of the livestock grazing management program upon ORV use are analyzed on pages 3-40 through 3-42. The BLM recognizes the problems associated with off-road vehicle use. In some cases, multiple use trade-offs may be necessary to accommodate rising ORV use and increasing demand for off-road vehicle areas. These trade-offs are analyzed through the

Bureau planning system with numerous opportunities for public comment. It is not the purpose of this EIS to analyze the effects of ORV use on the grazing program. However, the designation of an area as an ORV park would be preceded by the preparation of an activity plan and an environmental assessment, if deemed necessary.

Further, in accordance with Executive Orders 11644 and 11989, dated February 8, 1972 and May 24, 1977, respectively, the BLM will monitor the effects of off-road vehicle use on public lands under BLM jurisdiction. This monitoring would provide objective data to analyze the impacts of ORV use on other resources. On the basis of the information gathered, BLM may rescind area designations or may close such areas or trails to the type of ORV causing adverse effects, until such time as it is determined that such adverse effects have been eliminated and that measures implemented to prevent future recurrence. While it may not be an ideal situation, it is possible to have an ORV use area within an allotment intensively managed for livestock grazing.

18-7 The enterprise budget data (Appendix L) includes provisions for cow and calf death losses and herd replacement which are considered to be representative of normal industry conditions. Modification of the data to reflect, for example, an abnormal amount of cattle theft would require information representative of the whole local industry. A BLM effort to collect such information from Baker County was opposed by the local industry.

BAKER PRODUCTION CREDIT ASSOCIATION

Corner 2nd and Washington - Tel 685/523-4361
Box 696, Baker, Oregon 97814

19



May 29, 1980

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Or. 97208

Re: Draft BLM Ironside Grazing Management
Environmental Impact Statement

Dear Sir :

As a financial institution directly involved in making short and intermediate term loans to the cattlemen in the area covered by the BLM Ironside Grazing Management Environmental Impact Statement, Baker Production Credit Association through its Board of Directors takes the following position.

Arbitrary reductions in grazing allotments as proposed by the BLM in the draft of April 1, 1980, will have a serious negative affect on the cattlemen involved in the reductions. Most of these ranchers borrow money on both short term and long term conditions to operate their ranches, since livestock income is received on a very seasonal basis. Reductions as proposed would reduce the overall carrying capacity of the ranches and consequently would severely impair the repayment capacity of the ranches operations with respect to borrowed funds.

Many of these ranch operations are already in a strained position with respect to repayment capacity for loans.

From a cultural standpoint, use of BLM range provides a vital link in the seasonal use of other ranch lands. These allotments provide early grazing during a time prior to which cattle have adequate feed on irrigated lands.

From a longer range standpoint the value of many ranches may be reduced by the proposed cuts. While it is difficult to place a value on BLM permits when pricing a ranch unit for sale, it is commonly known that the overall carrying capacity of a ranch, including BLM, or other permits, is a primary

-2-

19-2 factor in determining the relative value of the deeded land.

We support the position of the Joint Baker County Livestock Association-Baker County Chamber of Commerce Economic Impact Committee. The findings of the above named committee based on a gross income affect are well founded as contrasted to the net income effect as used in the BLM Grazing Management Environmental Impact Statement draft. The entire population of the area studied and surrounding communities will be affected proportional to the gross revenue lost as a result of the proposed grazing allotment reductions.

Tim L. Kinnis, Chairman of Board

J. J. Freeman

Warner May

Stanley R. Kinnis

John E. Thompson

W. L. Kinnis, Resident

C-48

-1-

19-2

Response to comments in Letter 19

- 19-1 The text has been revised. See Errata, pages E-13, E-14 and E-23.
- 19-2 The text has been revised in an effort to clarify this matter. See Errata, pages E-12 and E-20.

PUBLIC COMMENTS

IRONSIDE-GRAZING MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

June 25, 1980

As concerned citizens of the State of Oregon, we are compelled to respond to the Bureau of Land Management's Environmental Impact Statement. We take exception to the BLM position of decreasing forage availability. We believe that since the 1930's great strides have been made to improve range conditions. Nevertheless, we acknowledge that further improvements are needed in the 1980's on both BLM and private ranges to support populations of wildlife and livestock. We have identified two critical areas for comment.

20-1 Since livestock grazing offers the only practical vegetative management tool, we reject the data used to set forage production levels listed in the Draft Ironside E.I.S. More accurate information has been collected and is available since this study was made. Because of the long range effects the draft E.I.S. will have on the multiple use users of the federal lands involved, we feel the more current information should be used in setting forage production levels for these lands.

20-2 A general lack of understanding is experienced after reviewing the economic data presented in the Draft E.I.S. It is difficult to determine from the review of information the actual value gained or lost from the proposed actions. The validity of the economic data is also questioned in part based on: (1) the duration of time allowed to users and BLM personnel in the Vale District to respond to economic data collection requests, (2) The minimal number of users responding to request for economic impact information and (3) The lack of information and minimal effect shown to the local business community in view of grazing reductions. Therefore, more in-depth surveys and information should be collected to determine the serious economic losses that will be experienced by both the ranching and business community if grazing reductions are initiated.

Since the BLM has not effectively presented adequate data to justify decreases in forage allotment and in view of the serious economic consequences in their proposal, we are convinced that the range practices used effectively during the past 3 decades should be maintained. When reliable information is obtained in the future by the BLM, we are committed to improving the forage conditions for wildlife and livestock.

By increasing rod nest production whether from game or livestock, the protein needs of man can be met. From all estimates of population growth and food competition between man and animal, the range represents the single best alternative to meet the protein needs of the future. We are convinced that our recommendations represent the most responsible avenue presently known.

We the undersigned support this position.

We, the undersigned, support and endorse the views and opinions as presented in the attached statements:

| NAME | ADDRESS | REPRESENTING |
|------------------|------------|-------------------|
| William T. Moore | Oakton, ID | Concerned Citizen |
| Art Ingh | Oakton | " " |
| Jerry E. Smith | Vale | Smith Cattle |
| Steve J. Silva | Brogan | Silva + Sons |
| Lynne Silva | Brogan | Hockhart Ranch |
| Roy Dan Boellth | Brogan | Frontier market |

| NAME | ADDRESS | ALLOTMENT NUMBER |
|-----------------|-----------------|------------------|
| Shroyer Ranches | Sweetfall, Ore | |
| Becker Ranches | Don Blunk, " | |
| Tom Branson | Grosveld Oregon | |
| Jerry Johnson | Grondale Oregon | |
| Charles Johnson | Oakton, Oregon | |
| Angus Smith | Vale Oregon | |
| John F. Pugh | Brogan, Ore. | |

| NAME | ADDRESS | ALLOTMENT NUMBER |
|---------------------|------------------------------|------------------|
| Stephen L. M. B. B. | Box 92 Jamison, Oregon 97809 | 101 |
| Angel Guarcasgado | Vale Ore. Rt #2 Box 255 | 101 |
| Roscoe E. Findley | Vale Ore. Rt 2 Box 343 A | 402 |
| Thomas L. McElroy | Vale, Ore. R.D. Box 4 | 102 |
| Norman Laurance | Vale Ore Rt #2 Box 50 | 219 |

| NAME | ADDRESS | ALLOTMENT NUMBER |
|----------------|----------------------------|------------------|
| Harry L. Smith | Rt. 1 Box 535 Oakton, Ore. | 402 |

Response to comments in Letter 20

20-1 See response to comment 5-4.

20-2 See response to comment 15-2

Suitability of Land for Livestock

"During the planning phase of the EIS, public input identified a major area of controversy over planned reductions in livestock use based on BLM's suitability requirements. No AUMs were allocated to cattle on areas with slopes greater than 50%, which accounted for major reductions on several allotments."

As a test, someday try walking up a slope that is measured to be 50% steep. Cattle grazing should not be planned on slopes exceeding 40% and then substantial reductions in AUMs for the steepness slope should be made. The topography of the land is extremely important in evaluating it for cattle grazing. If the 50% slope suitability for cattle grazing is retained, then a 90% reduction in AUMs for such areas should be taken.

Probably this liberal slope factor of 50% steepness accounts for the huge disparity in the EIS between the proposed reduction in livestock grazing of 25 percent against 80 percent of the area reported to be in only fair condition ("Late" condition).

As is stated in the EIS, sheep can satisfactorily utilize such steep country, but it is very questionable that grazing it by sheep justifies an increase of 6,909 AUMs as BLM proposes. The EIS should describe for each allotment the deductions made for steepness in slope in AUMs.

From a statement appearing in the Baker Management Framework Plan it appears the question of slope steepness has yet to be decided.

Summary

Alternatives

None of the alternatives are 100% acceptable. Each contain features that either violate features that conflict with sound principles of public land management or are impractical or too expensive to implement. The situation on each allotment must make the decision as to the correct action to take. This is recognized to some extent in the EIS in the wide range of adjustments (reductions, increases) in grazing use proposed for individual allotments.

The proposed decisions contained in the Baker and Northern Malheur Management Framework Plans that are buried in the Appendix of the EIS are with a few exceptions excellent, sound solutions to correcting unsatisfactory management of livestock grazing and other uses of the Ironside area.

Vegetation

In reviewing the proposals for future range management it would be helpful if cheatgrass, big sagebrush, rabbitbrush and other aggressive increasers on overgrazed range were described in the acreages they occupy as the dominant cover or in percentages of the vegetation in each allotment. The abundance or lack of these plants is additional evidence of the condition of the range, the need for reduction in livestock grazing and the applicability of management proposals.

Terminology

While the use of the words ecosite, climax, Late, Middle and Early all refer to range condition, it isn't difficult to visualize the bewilderment of Rancher X when his BLM range technician tells him 20 percent of his grazing allotment is "LATE", 20 percent is "MIDDLE" and the remainder is "EARLY".

However, in Table 3-8 in evaluating conditions in Riparian Zones standard terminology of Excellent, Good, Fair and Poor is used.

Another departure from customary terminology is found in describing loss of soil. It is difficult to visualize acre feet of sediment, when to many reviewers cubic yards is often the unit used to describe displacement of soil.

The designations G-1, G-2, etc. are a combination of vegetation, topographical and land surface features, such as scrapland, etc. Perhaps, it is simpler to describe an Allotment by use of such symbols than to name the dominant species and that the land is dry rolling hills, which break into steep south exposures, but one must become familiar with the meaning of the symbols before they are meaningful.

Riparian Areas

The statements appearing in the Baker and Malheur Management Framework Plans under Proposed Decision and Rationale, with the exception of the fence building proposed, are excellent. Reasons for rejecting huge investments in streamside fencing will be described under Range Improvements.

Wildlife

With the exception of Alternatives 2 and 5, wildlife in the proposal and other alternatives are treated as a second or third cousin to livestock grazing.

It is doubtful if the owner of this land - the public - understand the steady encroachment and drain upon wildlife habitat that has and is taking place because of man's insensitiveness to protecting these valuable natural resources. Years ago man invaded the best

wildlife habitat within the borders of the Ironside Area. Much of the area today is better adapted for the enhancement and production of wildlife than it is for the production of domestic livestock. Man's needs for beef, etc., can easily be met on terrain that is much more suitable for that purpose than is found on much land in Ironside; but the same isn't true for wildlife. What rationale is there in continuing to place wildlife in a secondary role?

As in the case of Riparian Areas, the recommendations in the Management Framework Plans are with few exceptions excellent. If actions are implemented as recommended, wildlife will be treated on this publicly owned land, not as secondary to livestock grazing but as a major natural resource.

21-5 The following sentence in the summary on wildlife needs explanation:

"Long term vegetation stagnation under Alternative 2 would reduce forage available to deer and elk."

Wild Horses

The recommendations made in the Management Framework Plan for Northern Malheur adequately solves the wildhorse problem, if the horses are held to a maximum level of 50 head. In addition, removing cattle from 25,505 acres in the Hog Creek Herd Management Area will eliminate overgrazing and provide the protection the critical deer winter range needs. An excellent decision if implemented.

Socioeconomics

According to the EIS there are 270 permittees who grazed 86,000 cattle in 1979. The total amount of forage authorized in grazing permits amounted to about 14 percent of the total annual forage required to feed these herds (9 percent in the Baker District portion and 19 percent in the Vale District portion). The figures represent the dependence upon public land for livestock grazing of these ranchers.

21-6 In the Baker District the dependence can only be considered minimal, and if livestock grazing were completely eliminated could it have more than a minimal effect upon the economy of the region?

In the Malheur District the effect of eliminating livestock grazing is substantial enough to continue it in balance with the importance of other public uses of the land and modified to increase the production of the forage crop.

There is really no reason to eliminate livestock grazing from public land, if there is no need to exclude it to protect the land from damage, to rehabilitate the land from overgrazing and to utilize the land for a more important purpose of greater benefit to a larger number of people, such as wildlife, watershed and outdoor recreation.

"Range livestock grazing is and will continue to be an important use of Western lands, and an important segment of Western economy. However, the Western range is and for some time has been a declining resource. We face the question of how to change this trend while yet using the resource. Perhaps, before it is too late, we can gain through management an up trend on much of the Western range resource. Some of it seems destined to slip rapidly below the margin of economic use."

- Western Land Water Use
Saunderson

Maximum sustained livestock production is dependent upon maximum yields of forage. Can maximum yields of forage be obtained from land 80 percent of which is in unsatisfactory condition? Likewise, doesn't economic conditions rise or fall with the sustained production of its source of wealth - in this case forage which is in depleted condition from years of mis-management and overgrazing?

Chapter I

Seasons of Grazing

Table 1-2 discloses that the "period of grazing" in many cases begins as early as March 1. From data in Table 1-5 Approximate Growth Stage Dates for Key Species, no species is listed as starting growth that early except willow, which is a riparian species and should be protected from livestock grazing.

21-7 Questions - Are the periods of grazing proposed the result of studies made of key plant growth as related to "range readiness" or fixed to coincide with the traditional turn out dates of permittees? It appears "tradition" is followed, although in the case of Allotment 201 named Allotment #2 the existing period is 4/01-10/31 and the proposed period is 3/01-10-31. This case of moving the seasons one month earlier is doubly interesting for it is proposed to make a reduction of 3,217 AUMs in this allotment. Is the March 1 season to be authorized a trade-off for the heavy reduction in grazing use?

This seems to be an appropriate place to quote the findings of the Squaw Butte Range Experiment Station situated 30 miles west of Burns, Oregon on early spring grazing.

"Much has been said about increasing range production by seeding crested wheatgrass and by spraying to kill big sagebrush, but often the easiest and quickest way to increase range production is to DELAY TURNOUT DATE. This works until early June turnout. Turnout date at the present time is generally about the first of April. (Traditional)

On Squaw Butte Range, cattle are held on meadows and fed hay until about the last week in April. They are then moved to fields of crested wheatgrass.

Too much early grazing is the most serious problem in range management."

Range Improvements

It is proposed to build 245.7 miles of fence, 74 reservoirs, 91 miles of pipeline, 11 guzzlers, develop 82 springs and 5 wells. Cost of these improvements is not estimated.

Fencing and some of the other improvements are primarily for the convenience of permittees and their employees. The large amount of fences and pipelines are of little value to other than livestock. The investment required to build and maintain them is not supported in the EIS.

About one-third of the Ironside area is proposed to be managed under the rest rotation grazing system. To properly implement rest rotation grazing requires a much larger amount of fencing than does other grazing systems that have proved to be satisfactory. If the capital investment in fencing can be shown to be justified by cost-benefit analysis and creates no adverse impacts on other uses of the land construction is merited. Abandoned fences on public land are not an unusual finding.

"The federal government has generally supplied funds for the restoration and rehabilitation of badly deteriorated public range lands. Improved forage production will rarely justify such expenditures at least until the condition of the range has been improved to the extent that the lands are no longer classed as deteriorated."

"On the other lands, investments above the level required to restore and protect the resource are made with the objective of increasing the production of forage. But even on these lands, improved forage production will not always justify the investment if judged on economic grounds."

- Public Level Law Review Commission -

"It would be difficult, in my opinion, to justify range lands expenditure in economic terms. Whether one uses a rationale based on direct benefits to users or indirect aid by alleviating poverty, the economic benefits are bound to be small because there are only a few people out there."

- Professor Weldavsky, U. of California
Study Made for Public Land Law Review
Commission

Sagebrush Spraying

On the question of using 2-4-D to kill big sagebrush, the expected life of such a practice according to Forest Resource Report No. 19, U.S. Dept. of Agriculture, Forest Service is 10 years. This means that the area would have to be sprayed again to kill the sagebrush. Therefore, spraying of chemicals to kill sagebrush is only a temporary measure. To make an authentic comparison, it is like applying a band aid to kill cancer. However, it is permanently lethal to broad leaved plants. Among these are several endangered species, which would not be protected if growing unnoticed in areas to be sprayed. A much better method of treating big sagebrush areas is that of tilling them with a brushland plow or other mechanical device. Such a treatment is recorded to have a 25 year life and is not accompanied by the yet as unknown effects of chemical treatments upon myriads of living organisms both on and in the soil, intermingled with big sagebrush. Expenditures for sagebrush spraying in unworthy and is not a prudent use of funds.

Since the EIS doesn't attempt to justify the investments in range improvements by the use of a cost-benefit analysis, construction of improvements should be withheld until a clearer determination of their usefulness and need is demonstrated. The fencing of riparian areas is a very expensive, simple solution to the problem, but aren't there other methods of managing livestock on these areas that are just as good and not as expensive? Seven hundred miles of fence to protect riparian areas is a multi-million dollar expenditure to build the fences on top of which an annual maintenance charge must be added for each year hereafter. Is this really a prudent investment?

Implementing the Proposals

The success or failures of managing public land and resources depends upon the firm adherence and attitude of the managing agency to implement its plans in compliance with the findings of the basic data it has, or in this case, the information contained in the EIS. Frequently, users of the land, usually grazing permittees, are unwilling to accept scientific data concerning the conditions of the land grazed by their livestock, especially if reduction in grazing is necessary to protect the land from overgrazing.

Historically, protests and appeals are filed; demands are made to remove or fire agency field personnel given the responsibility to carry out the remedial actions determined to be necessary from the basic data. Such actions cause long expensive delays which are totally unjustified.

It so happens that the Snake River - Sisley Creek Allotment #1001 in the Ironside Area fits this scenario.

In 1952 an intensive range survey was completed for the Snake River - Sisley Creek Allotment. It covered 27,086 acres of federal land and 17,106 acres of private land. The survey estimated the

carrying capacity for livestock to be 6.14 acres per AUM or a total of 411 AUMs. The private land was estimated to have a slightly higher carrying capacity of 6 acres per AUM. The record discloses that cheatgrass, an annual brome grass, and indicator of poor (Early) range conditions had replaced the native grasses and was the dominant species below the 5,000 foot elevation on the Allotment. Many years of overgrazing and abusive range practices had seriously reduced the forage productivity of the area, but rule-of-thumb guesses of carrying capacity placed it at 3 acres per AUM. Therefore, the range survey projected a cut of 60 percent in livestock. After many meetings with permittees, the amount of cut was reduced to 47 percent, which was to be applied in 1953. However, a small group of permittees claimed for various and really indefensible reasons that the 1952 survey was inaccurate. They demanded a re-survey and to enforce their demands they enlisted the help of Senator Morse and Congressman Ullman, which they easily obtained. These politicians soon forced the Bureau of Land Management to agree to make another range survey. Four years of discussions took place in a vain attempt by the BLM to obtain an agreement from the permittees that they would accept the figures of the re-survey without protest. The 1958 re-survey covered 21,197 acres of federal land and estimated the carrying capacity to be 3,922 AUMs of which 3,355 were to be allocated to livestock and 567 to wildlife. The grazing season was cut from April 15 to May 1. The reduction in livestock would be 60 percent.

Table 1-2 Management, Period of Use and Vegetation Allocation in the EIS discloses that the reductions in livestock grazing projected in the 1958 range survey still remain to be made.

The sad history of the Snake River - Sisley Allotment clearly illustrates the strength a small group of permittees aided by politicians can successfully thwart soundly conceived, carefully prepared plans of a federal agency.

Snake River - Sisley Creek
Range Surveys Grazing Capacities

| Federal Land | Private | Forage Prod. AUMs | Allocation in AUMs Livestock | Wildlife | Other |
|--------------|---------|-------------------|------------------------------|----------|---------|
| 1952 | 27,056 | 17,106 | 4,411 | - | - |
| 1958 | 21,197 | - | 3,922 | 3,355 | 567 |
| 1979 | 23,477 | 2,790 | 2,615 | 1,499 | 229 887 |

In the 18 years since the 1952 range survey the Table shows the drastic drop in forage production that has taken place. In 1952, 6.14 acres produced one AUM, today it requires 8.97 acres, a drop in production of over 31 percent. Wouldn't it have been much more prudent for the ranchers to have taken the projected reduction in 1953, to stop the overgrazing and to start rebuilding the productions which has been lost because of unparalleled obstinacy

and lack of clear thinking on the part of a few?

The action to be taken on the Snake River - Sisley Creek Allotment 1001 as described in the EIS will require a reduction of 3,264 AUMs from the present active livestock use of 4,763 AUMs to reach present forage production. This amounts to a reduction of .685 percent. If Senator McClure's Amendment to the 1980 Interior Appropriation Bill, limiting livestock reduction to no more than 10 percent it will take seven years to reach grazing capacity as estimated today on this severely overgrazed public land. At the end of that period what will the new forage production base be after seven more years of overgrazing?

In this case and in dozens of others like it, the responsible federal agencies have been stopped from taking critically needed actions by recalcitrant and mis-informed ranchers. Aside from the expensive delays Snake River-Sisley Creek permittees have caused, two competent BLM field officers who were responsible for implementing livestock reductions on the allotment were forced into transfers to other positions - one to Salt Lake City and the other to a Nevada location. The cost of these utterly useless transfers upon personnel is a destroyer of morale and influences the attitude toward solving grazing problems toward the negative rather than the positive side.

"Most livestock men do not understand the botanical facts or the ecological concepts that underlie the technicians' appraisals of the forage situation and it may fairly be suspected that they do not want to believe what they do understand. This fact that they have been so successful during the past 25 years in enlisting the aid of (1) congressional and other politicians, and (2) local business groups in all of the livestock communities, and (3) western romantic cow-boy public opinion in their behalf is a final clinching reason for standing together to resist curtailments even on behalf of those members who have most outrageously abused the range resource."

- Charles McKinley
The Management of Land & Related
Water Resources in Oregon

In conclusion, of the Snake River - Sisley Creek Allotment and the 151 allotments scheduled for livestock reduction, it is imperative that all of the owners of the land - the public - stand squarely behind the BLM in implementing those reductions. It is obvious from recent past history that the BLM standing alone cannot accomplish a task of such dimensions without the help of the hundreds of thousands of people who will benefit

from the described needed changes in the livestock grazing of the Ironside Area. In this undertaking OEC offers its full support and such assistance as it can give to the BLM officers assigned to the responsibility of implementing the reductions in livestock grazing and other changes.

Sincerely,

Earl D. Sandvig

Earl D. Sandvig
Oregon Environmental Council

EDS/jah

cc: Sen. Mark Hatfield
Sen. Bob Packwood
Cong. Al Ullman

Response to comments in Letter 21

- 21-1 There are 613,407 acres of private land within the allotments (see page 1-1 of the DEIS). Private lands were not included in the soil-vegetation inventory.
- 21-2 An explanation of lands for which there are no data was given on page 2-1, paragraph 5.
- 21-3 The proposed decision for watershed protection in the Northern Malheur Management Framework Plan (page A2-3 in the DEIS) is incorrectly stated and has been rewritten. See errata for page A2-3.
- 21-4 The calculations for AUM reductions for steepness of slope in each allotment are available at the Baker District Office.
- 21-5 Summer grazing by livestock results in abundant early grass growth the following spring. Likewise, moderate grazing by livestock stimulates leader growth of bitterbrush. Existing deer and elk populations are dependent on early "green-up" of grasses and good browse production. Without livestock, grasses would become rank and provide less early spring forage; browse production would decrease and any shrubs would grow out of reach of deer in a few years.
- 21-6 The anticipated effect on the local economy of elimination of livestock grazing from public land in Baker County is discussed in the Economic Section, Chapter 3. (See Errata) Personal income for Baker County was \$104,568,000 in 1978 (page E-8) compared to an estimated \$468,000 attributable to all livestock grazing on BLM lands in the Baker District (page E-28). Refer especially to the analysis of impacts of Alternative 2 (No grazing).
- 21-7 The season of use listed on Table 1-2 spans the period from the earliest date that cattle are allowed to graze until the latest date grazing will be allowed. Under the proposed action, Allotment 201 would have four grazing systems, none of which would span the entire period of use given in Table 1-2. The change in season of grazing use to March 1 is proposed to allow use of the spring grazing system on riparian habitat for enhancement of woody species. Experience in the EIS area has shown early grazing to be beneficial to key plant species.
- 21-8 A benefit-cost analysis of constructing the range improvements has not yet been made. Cost estimates of the range improvements would be rough at this time since the exact project locations have not been determined. See response to comment 12-52 for an estimate of the cost of the range improvements.
- 21-9 The spring and modified rest rotation grazing systems are also expected to improve riparian vegetation. The expense of construction and maintenance of the proposed fences is one of the factors to be considered by the decisionmaker. See response to comment 4-2 for reasons why range improvements were proposed.

REALTY

MARCUS C. SACKOS, Broker

1405 Campbell Street
BAKER, OREGON 97814

503/323-4434 or 503/323-5707

June 27, 1980

Oregon State Director Of Bureau Of Land Management
P.O. Box 2695
Portland, Oregon 97208

Dear Sirs:

The following is a brief breakdown of several different methods of arriving at an approximate value of an A.U.M. of grazing on native range in the Baker area of Eastern Oregon. Further, as an example of the effect on value of an actual deeded ranch operation caused by a 50% reduction of its B.L.M. allotment. Also, included are several current market indications of private rangeland value and an indicated value per A.U.M.

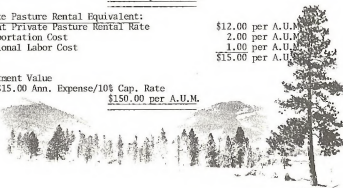
A.U.M. Value Determination:

- | | |
|----------------------|--------------------|
| 1) Hay Equivalent: | |
| 1 ton of hay | 2.5 A.U.M.'s |
| Current Value of hay | \$90.00 per ton |
| Labor to feed | 5.00 per ton |
| Total | \$95.00 per ton |
| | |
| \$95.00/2.5 A.U.M.'s | \$38.00 per A.U.M. |

Investment Value
\$38.00 Ann. Expense/10% Cap. Rate
\$380.00 per A.U.M.

- | | |
|---------------------------------------|--------------------|
| 2) Private Pasture Rental Equivalent: | |
| Current Private Pasture Rental Rate | \$12.00 per A.U.M. |
| Transportation Cost | 2.00 per A.U.M. |
| Additional Labor Cost | 1.00 per A.U.M. |
| Total | \$15.00 per A.U.M. |

Investment Value
\$15.00 Ann. Expense/10% Cap. Rate
\$150.00 per A.U.M.



(2)

3) Deeded Pasture Market Value Equivalent-Representative Range Value:

- | |
|---|
| a) \$120,000. for 640 acres of 3 ac./A.U.M. @ \$194/ac. |
| 3 ac. x \$194 = \$582/AUM |
| b) \$260,000. for 2600 ac. of 7 ac./A.U.M. @ \$100/ac. |
| 7 ac. x \$100 = \$700/AUM |
| c) \$247,500 for 1500 ac. of 3.5 ac./A.U.M. @ \$165/ac. |
| 3.5 ac. x \$165 = \$578/AUM |

Average Indicated Market Value Per AUM = \$620/AUM

Averaging these three methods of value determination, indicates the following value:

- | | |
|--------------------------------------|-----------|
| 1. Hay Equivalent | \$380/AUM |
| 2. Private Pasture Rental Equivalent | \$150/AUM |
| 3. Market Value Equivalent | \$620/AUM |

Weighted Average of Indicated Value \$383/AUM

The effect of market value on a typical ranch operation due to a 50% loss of BLM grazing privilege can be seen by the following example of an actual cow-calf operation near Baker.

Ranch Size:

| | |
|---|--------------------|
| Irrigated Hay & Pasture | 552 acres |
| Range (Crested Wheat Grass @ 3 Ac./AUM) | 505 acres |
| BLM Permit (Licensed @ 3 Ac./AUM) | <u>4,350 acres</u> |
| Total | 5,407 acres |

Ranch Capacity:

| | |
|-----------------------------|--------------------|
| Irrigated Hay & Pasture | |
| 552 Acres x 6.5 AUM/Ac. | 3,588 AUM's |
| Range - 505 Ac. x 3 Ac./AUM | 168 AUM's |
| BLM Permit - 3 Ac./AUM | |
| 4350 Ac. x 3 Ac./AUM | <u>1,480 AUM's</u> |
| Total AUM's | <u>5,236 AUM's</u> |

Total Animal Units $\frac{5236 \text{ A.U.M.'s}}{12 \text{ Mos.}} = 436 \text{ A.U.}$

PRESENT RANCH MARKET VALUE:

The market on a well improved and balanced operation in the Baker area is currently \$2400.00 per Animal Unit which would establish a value of our example ranch as follows:

(3)

436 A.U. x \$2400 = \$1,046,400.

A 50% reduction in the BLM privilege from 1480 A.U.M.'s to 740 A.U.M.'s would reduce the capacity at least 740 A.U.M.'s / 12 mos. = 62 A.U.'s which would reduce the market value 62 A.U. x \$2400 = \$148,800.

However the market value of the ranch has been reduced even further by the fact that this ranch is no longer a well balanced operation, due to the 50% loss of spring range which will require using the irrigated pasture earlier, and feed hay longer to 200 cows of the herd. This per unit value of the ranch would be reduced a minimum of \$300 per unit or \$130,800. The additional hay required for one month in the spring until the irrigated pastures are ready would require (200 hd. x 1/2 ton per month = 100 ton). 100 Ton @ \$70.00 per ton or an annual investment of \$7,000 which equals \$7,000/10% cap rate or reduction in value of \$70,000.

The total effect of a reduction in the BLM grazing privilege would be as follows:

| | |
|--|------------------|
| A.U. Reduction | \$148,800.00 |
| Impairment of Ranch Balance | 130,800.00 |
| Additional Hay Requirement | <u>70,000.00</u> |
| Total Value Reduction to Deeded Property | \$349,600.00 |

This represents a reduction of \$472. per A.U.M. caused by the grazing privilege cut. The example ranch used is dependent on the BLM grazing to the extent of 28% of the total carrying capacity (BLM-AUM's - 1480) =
(Total AUM's - 5236)

A BLM reduction to a ranch that was more dependent on federal grazing, as are many ranches in the area, would have a more significant effect on their operation and market value.

SUMMARY:

It is our opinion that the present value of an AUM of grazing is approximately \$400. The BLM-EIS study reflects a value of \$65. per AUM which is completely unrealistic based on hay equivalent, market equivalent, deeded pasture rent equivalent, or investment value represented to the total ranch operation.

The \$400. per AUM value is much more realistic under today's conditions and undoubtedly will become higher in the future.

Response to comments in Letter 22

22-1 The text has been revised to include the estimate of the value of grazing privileges presented in the comment. See page E-12 in Errata.



Baker County Chamber of Commerce

490 CAMPBELL STREET - P. O. BOX 69 - (503) 523-5855
BAKER, OREGON 97814

June 26, 1980

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Dear Sir:

Enclosed is a copy of the Joint Baker County Chamber of Commerce/Baker Co. Livestock Association comments on the BLM's Ironside Grazing Management Draft Environmental Impact Statement (DEIS) which addresses Baker and Malheur Counties, Oregon.

If you have questions about this material, feel free to contact me at my office (503-523-4471).

Sincerely,

Randell C. Guyer, Jr.
Randell C. Guyer, Jr.
Chairman, BCLA-BCC of C
Joint Economic Impact
Committee

"The Big Country"



Baker County Chamber of Commerce

490 CAMPBELL STREET - P. O. BOX 69 - (503) 523-5855
BAKER, OREGON 97814

May 28, 1980

Mr. Frederick W. Obermiller
Assoc. Professor of Agriculture & Resource Economics
Oregon State University
Corvallis, Oregon 97330

Re: BLM Ironside Grazing Management
Environmental Impact Statement

Dear Mr. Obermiller:

Our joint BCLA-BCC of C Economic Impact Committee has performed an initial review of the referenced document. This review has raised several questions and resulted in certain conclusions. We would appreciate your professional opinion as an economist about these matters which are summarized below:

- (1) The BLM has restricted its economic impact information to use of a net income effect. We have contended that presentation of gross income effects are necessary to judge the economic effect on business and employment.
- (2) Economic information effect in the study is based on rancher net income for a short period of time. Rancher net incomes for these years were quite low and in some years negative. We contend that use of net income in the BLM's study does not result in valid economic information. The cattle industry is unique in this regard. Cattle ranchers are required to maintain their herds and operations through both good and bad years. There is no consistently direct relationship between rancher net income and spending. Therefore, most of the BLM economic information in the study is not valid.

Additionally, use of historical nominal data is not valid for

"The Big Country"

Frederick W. Obermiller
May 28, 1980

page 2.

determining future economic impact.

23-1

(1) We believe that a rancher's motivation may not be the same as other businessmen. The BLM study does not address this question.

(4) The study does not address what may be the greatest resource of all, the individual rancher, his family, his employees, his business associates, etc.

(5) The BLM study does not adequately address the economic impact on the individual rancher.

(6) The BLM study is quite narrow. It fails to address other economic questions such as:

- (a) What is the best economic use of the range?
- (b) Is there a direct relationship between best economic use and best range management?
- (c) Is removing livestock from the range the only alternative to range improvements?
- (d) What are the costs/benefits of alternative range improvement programs compared to removing livestock?
- (e) What is the economic potential of the range? What would be the economic impact of resource increases?
- (f) What is the economic value of the range? Is it the range in its natural state? Is it the grass and brush? Could it be the user resource?
- (g) What is the cost to the consumer of alternative uses?

(7) The BLM study uses general economic data. Is this data appropriate to use for Baker County?

(8) Won't the USH/Baker County economic study provide more valid and complete Baker County economic impact information?

23-2

(9) The BLM economic information is based on an assumption that the percentage of cattle sales to annual farm income can be applied to County farming personal net income to get ranching net income. Is this assumption/relationship valid?

Frederick W. Obermiller
May 28, 1980

page 3.

(10) The BLM study addresses County economic effect. In reality the economic effect is greater, in that ranchers also spend monies in surrounding counties. Should a regional effect be determined to make the study more valid?

(11) The BLM study uses a general economic net income multiplier. In our case we are talking about loss of new dollars to Baker County since most cattle sales are to outsiders. It appears that since we are losing all new money a higher than normal multiplier should be used.

23-3

(12) The BLM study uses a net AUM loss in computing economic impact. The increases netted in this study are not related except for timing to the proposed cuts. We firmly believe the only true economic impact is one measured against the total cut which is over 12,000 aum's.

23-4

(13) The study does not adequately address the loss of long- and short-term borrowing potential as a result of aum cuts.

23-5

(14) The study does not correctly represent the local economic effect of increased wildlife which we believe is a very minor local economic impact. Reduction will not always result in increased wildlife.

(15) The BLM study calls for a 60-day comment period to June 27, 1980. We believe the complexity of the study requires a much longer response period, particularly when there are significant questions about the validity and completeness of the BLM study. We have requested an extension to January 1, 1981.

(16) It would be our conclusion that the above questions can lead to only one conclusion concerning the economic sections of the BLM study. The study is totally inadequate and unacceptable as is and requires complete revision by the BLM.

Frederick W. Obermiller
May 28, 1980

page 4.

I am sure we will have many more questions as we continue our economic study but would appreciate your thoughts on the above or any other matter you believe is appropriate, prior to the BLM's June 4, 1980 public hearing date. Please give me a call (523-4471) if you have any questions concerning the above.

Very Truly Yours,

Randell C. Guyer, Jr., Chairman
Joint BCLA-BCC of C Economic
Impact Committee

cc: Mr. Dennis Goodman
Mr. Bob Steward
Mr. Myron Miles

Department of
Agriculture and
Resource Economics



Covallis, Oregon 97331 808/754-2942

June 4, 1980

Randell C. Guyer, Jr., Chairman
Joint BCLA-BCC of C Economic Impact Committee
Baker County Chamber of Commerce
Baker, OR 97814

Dear Mr. Guyer:

I am responding to your letter of May 28, 1980, asking for my professional opinion on economic issues related to the BLM Ironside Grazing Management EIS. My comments are keyed to the points enumerated in your letter. They are as follows:

- (1) To calculate employment impacts using an I/O model, the effects on household income in each sector of the local economy must be projected. Dividing through by the average annual wage in each sector gives employment impacts in that sector. Summing over all sectors gives total employment impact in the local economy. To project changes in leading business indicators (gross product, value of production, bank deposits, etc.) total transactions impacts must be calculated. In short, net income projections are relevant for some purposes, gross income for other, and the distribution of both net and gross impacts among sectors of the local economy should not be ignored.
- (2) In a static impact analysis, normal cost and return data for the cow-calf sector (averaging over the cycle) should be used. There are several ways of doing this. Perhaps the simplest is to use current costs and the average return over the cycle above costs as the means of determining net income. A better approach is dynamic analysis calculating cash flow and cost over the cycle as prices and herd numbers change. However, the latter approach is complicated and expensive, and probably beyond the capability of the Bureau given their time and monetary constraints.
- (3) There are good indications in prior research that many ranchers, perhaps most, do not attempt to maximize annual profit. Consequently, a linear programming solution based on an annual profit maximization assumption can generate projections about what should happen that differ markedly from what actually will happen.

- (4) Forage, whether public or private, is an intermediate product. Its value is derived from the use, or uses, to which it is put. Normally, the value derived through livestock production and sale yields higher forage values. Hence, the economically optimal allocation of forage among uses and users normally will allocate most or all forage to domestic livestock operations. From an economic point of view, the appropriate frame of reference for forage management impact analysis is, therefore, the affected production units and consumption activities.
- (5) No two ranchers have exactly the same type of operation, have the same opportunities, face the same constraints, and share the same motives. Consequently, only through an operator-by-operator analysis could impacts on the individual ranch operation be assessed. Such an approach really is not feasible. Instead, operations are grouped by type, and group averages are used in the impact analysis. The broader and more heterogeneous are groups, the less precise are impact projections.
- (6) The EIS addresses none of the issues raised here, which I suppose is understandable given its purpose: To document the impact of a proposed change or changes without considering other alternatives. The EIS is not concerned with the benefits and costs of range improvement programs or management options other than those specified as "alternatives analyzed".
- (7) No two counties have the same economic structure. Thus, the impact of a given change (like reduced federal grazing) will vary from county to county. The structure of a county can be approximated using nonlocal data and making certain assumptions, or it can be measured using local data. The latter approach is more costly and time consuming, but also is more accurate.
- (8) Because the Baker County OSU study specifically addresses all of the problems and issues raised in (1) - (7) above, it will yield more valid and accurate information on the local economic impact of the proposed AUM reduction. Again, however, I should point out that the Bureau had neither the time, money, nor personnel to do the type of research project which OSU is doing in Baker County.
- (9) I am not sure what this point references, but it is true that the relative contribution of the ranching industry to total agricultural income in Baker County varies from year-to-year. This is clearly seen in the county agricultural statistics published by Stan Miles of this Department.
- (10) The value of multipliers do tend to increase with the level of geographic aggregation. The cow-calf industry multiplier for the State is, for example, greater than the equivalent Baker County multiplier. Consequently, the regional impact of a federal grazing reduction in Baker County should be expected to exceed the Baker County impact. Whether or not the regional

- impact actually is estimated depends on the purpose of the analysis. In general I would recommend against calculating regional effects unless directly affected operators are headquartered in other counties.
- (11) There are different ways of deriving and using net income multipliers. It is not clear to me which approach was used in the draft EIS, but I think the Grant County model coefficients were employed (see p. 3-54). If so, I believe the best available net income multipliers were used by the BLM. It would be the gross value of lost calf sales, time 0.51, that would represent the total net income loss in Baker County. About 53-60 percent of this amount would be permittee loss. These projections incorporate all of the simplifying and abstracting comments discussed in points (1) - (7) above.
- (12) The net AUM reduction is appropriate given the simplifying assumptions. It is not appropriate given the Baker County OSU study approach. Proposed AUM losses and gains, and their associated impacts, both must be considered, but considered separately rather than netted. The distribution of gains and losses among ranching operations should be analyzed. Both losses and gains should apply only to licensed AUM's.
- (13) True.
- (14) The relevant question is the contribution of wildlife to local economic activity. It is unclear to me how the local economic benefits to wildlife were projected. The values do seem high.
- (15) I think that the relevant questions are related more to the decision and implementation period than to the comment period, and the extent to which the BLM is willing to base decisions and implementation on the availability of information that is superior to that which appears in the draft EIS.
- (16) I have always argued that good decisions require good facts. We are trying, in the course of the Baker County OSU study, to assemble an up-to-date, reliable, and powerful basis for local economic decision-making. Our prior experience in Grant County and elsewhere suggests that natural resource management and use decisions will meet with a much higher level of local acceptance if based on the type of information we will be collecting this summer, and reporting to Baker County and other interested parties this fall.

I hope this letter responds to, rather than avoids, the questions raised by you and the Committee. Please let me know if further elaboration or clarification is needed.

Sincerely,

Frederick W. Obermiller
Frederick W. Obermiller
Associate Professor
Extension Resource Specialist

WRITTEN STATEMENT ON THE EFFECT OF
B.L.M. GRAZING PERMITS ON
RANCH REAL ESTATE VALUATION

The case has been made that the Ironside Grazing Management Environmental Impact Statement has been poorly researched and therefore, should be completely redone.

As a particular example, in a matter of great importance, with reference to the value of B.L.M. Grazing Permits to Ranch real estate Valuation, the Ironside statement states on page 2-39:

A recent report of 52 ranch sales in Grant and Umatilla counties, including nine with BLM and eight with USFS grazing privileges, indicated that for private range land an additional AUM adds \$55.45 to the sale price (Winter 1979, p.16). With regard to Federal grazing, the analysis indicates that "public grazing privileges do not exert a statistically significant effect on the sale price of mountainous grazing land in the study area during the time period 1970 to 1978." (Ibid, p.19).

C-63
23-6 This is the last word on this subject in the statement leaving in print unrefuted that BLM grazing permits have no effect on the real value of ranches being sold.

To absolutely refute this statement, we will quote from the BLM Owyhee Grazing Environmental Impact Statement Draft written April 1980, the same time as the Ironside Statement and we quote from page 3-33:

As early as 1925, it was recognized that the annual value of the federal grazing privilege was being capitalized into rancher property.

"It is argued that long use of the range in connection with the early settlement of agricultural lands has resulted in capitalizing the values of public pasturage as part of the value of the ranch;..." (U.S.D.A. 1925).

A report published by the Utah State University Experiment Station stated "there was nothing illegal or unethical in the fact that grazing permits took on a value; ranchers just reacted to an economic situation that was created by government policy. Permit values rose because ranchers who had grazing permits were capturing economic rents in the form of low cost grazing; i.e., the grazing fee and recognized non-fee costs did not equal the value of the grazing to ranchers. Thus, the authorization to use the federal lands and the associated economic rents were capitalized into rancher-owned assets. This value could show up either as a permit value or as an increased value of the commensurate property" (Nielson 1971).

23-7 Although the BLM does not recognize this capitalized value of grazing permits, it is known that permits have sold at prices ranging from \$25 to \$55 per AUM in southern Idaho (Federal Land Bank 1979, Production Credit Association 1979, Farm Home Administration 1979, personal communication):

Response to comments in Letter 23

- 23-1 Studies have indicated that profit is typically not the primary motive keeping ranchers in the ranching business. The following statement in the Draft Owyhee Grazing Environmental Impact Statement (1980, page 3-46) elaborates:

A ranching lifestyle has been described by some as "one which will help very few people to become rich but is a family-oriented lifestyle which provides a good quality of life for those who choose it." In the 1970s, with high expenses and low beef prices, ranchers have faced economic and social pressures which could bring about changes in the industry. Economists (Martin 1968, Schultz 1970) think the livestock industry lags behind other sectors of American agriculture in areas of managerial efficiency and acceptance of innovation. Ranchers tend to make decisions based on noneconomic motives, such as maintaining a way of life. High profit is frequently not their primary goal (Schultz 1970). It would appear that maintaining the ranching way of life is more important than maximizing profits (Martin 1968).

Schultz found that 86 percent of his sample of western livestock operators viewed ranching as a way of life rather than a profit making enterprise.

Grigsby (1976, cited in the Ironside DEIS), in his study of Harney County, Oregon, also indicated that many of the ranchers hold on to their operations because they derive some benefit not measured in dollars (page 99).

- 23-2 The approach and assumptions stated in the comment were not used in developing any estimates. The comment may be based on a misinterpretation of Appendix M, which is not referred to in the revised text.
- 23-3 The impacts on individual ranchers were calculated on the basis of their total AUM loss. Community impacts were calculated on the basis of the net AUM loss because the increases are part of the management action.
- 23-4 The text has been revised in an attempt to clarify these impacts.
- 23-5 The economic impacts of wildlife-related recreation are based on projections of recreation activity. The economic impacts have been revised and their method of estimation explained in the text.
- 23-6 The study was cited without qualification in the DEIS as information contradicting conclusions reached in the preceding paragraph of the text. The text has been revised in an attempt to clarify the conclusion. See pages E-12 and E-20.
- 23-7 The text has been revised to a range of values. See page E-12 in Errata.

June 26, 1980

CERTIFIED MAIL
Number 681648

Frank A. Edwards
Acting State Director
Bureau of Land Management
Oregon State Office
P.O. Box 2965
Portland, Oregon 97208

SUBJECT: IRONSIDE DRAFT GRAZING
MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

Attn: GERRY FULLERTON, EIS TEAM LEADER

Dear Mr. Edwards and Fullerton:

Western Range Service represents clients who graze livestock in the Vale District and who control all or the majority of the licensed grazing use in the following allotments included in the Ironside Draft EIS.

| | |
|------------------------|-------|
| Allotment Number Two | (201) |
| Allotment Number Three | (202) |
| Alkali Allotment | (101) |
| Buck Brush Allotment | (218) |
| Westfall Allotment | (227) |

These five allotments represent 37% of Vale District Active AUMs computed for 1977.

The enclosed comments are presented to the Bureau on behalf of the following range users:

Alkali Allotment Grazing Association
Arriola Brothers
James Corrigan
Becker Ranch, Inc.
Glanville Farms, Inc.
B. N. Glanville
Richard Jordan
Thomas Silvey

Messrs. Edwards and Pullerton
Page Two
June 26, 1980

The sixty (60) day review period ending June 27, 1980 provided inadequate time to thoroughly analyze the 205 page document. Comments from Western Range Service reviewers are presented separately due to the brief comment period allowed. Additional comments will be submitted within the thirty (30) day period following the Federal Register notice of availability announcing the final EIS, so that they will be available for BLM's preparation of the Rangeland Management Program Document.

Please send copies of the Final Ironside EIS and related materials directly to the following individuals to provide maximum time for our response to the Final EIS.

AL STENINGER
P.O. Box 1328
Elko, Nevada 89801
(3 copies)

WILLIAM SCHROEDER
Box 220
Vale, Oregon 97918

D. W. HEDRICK
Dean, School of Natural Resources
Humboldt State University
Arcata, CA 95521

LAMAR SMITH
6021 E. Eli Street
Tucson, AZ 84771

ROGER CORRIGALL
Westfall, OR 97920

We will meet with you in Portland, Vale, or on the allotments if you desire additional comments that we may provide.

Sincerely,

Al Steninger

Al Steninger

AS/db
Enc.

cc: William Schroeder
WRS staff participants
WRS clients

COMMENTS ON IRONSIDE DRAFT EIS
By
Al Steninger

Successful Management Exists

Grazing management practices have existed for many years on the five allotments represented by Western Range Service. Prior to the 1978 grazing season Interim Allotment Agreements were completed on four of the five allotments formalizing management activities.

Voluntary reductions in stocking rates ranging from 9 to 15% were taken by the livestock permittees by reducing livestock numbers and season of use in 1978 and 1979. For the 1980 grazing season an additional 12% reduction was voluntarily taken by the Allotment Two (201) users by deferring turnout two weeks and removing livestock two weeks earlier (April 1 to 15 and October 31 to 15).

Successful intensive grazing management systems are in practice on four of the allotments.

TABLE 1
Interim Allotment Agreement

| Allotment Name | Number | Voluntary Reduction of AUM's | Change In Season Of Use | Intensive Management |
|-------------------|--------|------------------------------------|-------------------------------|-------------------------|
| Alkali | 101 | *15% | No | Yes |
| Allot. Two | 201 | 15-27% | Yes | Yes |
| Allot. Three | 202 | 9% | Yes | Yes |
| Buck Brush | 218 | 14% | No | Yes |
| Westfall | 227 | 0% | No | No |

* Actual agreement provided for 11,355 AUMs (15%), not 10,492 AUMs (21%) as shown in Table 1-2 p 1-3.

24-1

The Interim Allotment Agreements included a cooperative range study monitoring program. Livestock forage utilization studies results for 1978 and 1979 document that the current stocking rates are below the proper livestock carrying capacities.

Table 2

BLM Range Utilization Study Results
For Key Perennial Grasses

| allotment Name | Number | 1978 Utilization % | 1979 Utilization % |
|-----------------|--------|-----------------------|-----------------------|
| Alkali | 101 | 26% | 21% |
| Allotment Two | 201 | 36% | 46% |
| Allotment Three | 202 | 35% | 35% |
| Buck Brush | 218 | 39% | 35% |
| mean | | 34% | 34% |

Maximum allowable utilization levels in the allotments ranged from 50% to 65% utilization, substantially above the levels recorded. The studies did reveal an imbalance of forage availability in Allotment Two. Spring forage abundance was below levels available for summer and fall. The livestock operators voluntarily took a turnout deferment of two weeks in 1980 as a management adjustment to achieve seasonal balance of available forage and allow spring growth to advance sufficiently prior to commencement of grazing.

Apparent trend studies conducted by the Bureau and reported in the EIS reveal that 85% of the Ironside EIS study area is in a static to improving trend. Three of the five subject allotments received Apparent Trend ratings in the EIS. The trend was static or upward on 89% of the 180,000 acres contained in the subject allotments.

National BLM Director, Frank Gregg, and Division of Range Management Chief, Maxwell T. Lieurance, have both publically stated that no grazing capacity reduction will be imposed when the range is in a static or improving condition.^{1/}

Utilization studies conducted by BLM but not reported in the EIS combined with Apparent Trend data from the EIS provide convincing evidence that the Interim Allotment Agreement Program has been successful. Stocking levels are below the proper capacity of the range and the grazing management systems are working satisfactorily.

The Interim Allotment Agreements with BLM provided the following terms and conditions:

*v. Additional Considerations

1. This agreement is an interim management measure that shall remain in effect

^{1/} Lieurance. Transcript. Public Hearing with Washington D.C. Representatives of BLM, Nevada Cattlemen's Association, Elko, Nevada. July 25, 1980.

until land use allocations are considered in the Ironside Grazing Environmental Impact Statement, and Allotment Management Plan has been agreed to and/or implemented. This agreement will become void at that time.

2. It is agreed that the terms and conditions of this agreement shall be binding upon the permittees, their respective heirs, executors, administrators, successors in interest or assigns."

It is the hope and expectation of our clients that the Bureau will honor their commitment to the Interim Agreements through the Allotment Management Plan implementation stage. The additional years of range study data preceding the AMP will provide the guidance for fine tuning the existing intensive management practices so that a comprehensive AMP can be judiciously evolved.

Negative Tone of EIS

The Draft EIS presents a basic premise that livestock grazing is harmful to the vegetation and to all other interests and uses of the public lands. The proposed solutions assume that reduction of livestock grazing along with overly complicated grazing management systems are valid remedies.

the premise and assumptions are wrong. Only abusive overgrazing can be harmful to the resource. Grazing treatments employing simple and flexible management systems are most beneficial and cost-effective.

A Positive Approach to Management

Vegetation conditions and livestock stocking was favorably reported for the Vale District when Heady and Bartolome^{2/} presented on vegetation for 1975 as follows:

"we believe that at least 50 percent of the district is in good or excellent condition and that the trend of nearly all the district is either stable or improving". (p 93)

"From a vegetational standpoint the Vale Program has been highly effective. Formerly dense and nearly pure stands of big sagebrush have been converted to

^{2/} Harold F. Heady and James Bartolome, 1977. The Vale Rangeland and Rehabilitation Program: The Present Repaired in Southeastern Oregon. USDA Forest Service Resource Bulletin PNW-70. 139 pp.

grasslands on about 8 percent of the district. The additional forage provided by improvement of range conditions gave the opportunity for flexibility in grazing use and further improvement in the untreated ranges. The district now produces more range forage than livestock harvest. The excess, however, provides stability against drought and needed cover and feed for wildlife". (p 94, 95).

* Harold P. Heady and James Bartolome, 1977. The Vale Rangeland Rehabilitation Program: The Present Repaired in Southeastern Oregon. USDA Forest Service Resource Bulletin PNW-70. 139 pp.

The Vale Project report was published in 1977. In 1978, additional reductions of 13% in livestock grazing occurred in the Vale District (p 2-41) and upon the five subject allotments. (1-3, 1-4).

The proposed vegetation allocation calls for additional reductions on the five allotments of 21%, for a total of a 37% reduction from the grazing preference totals.

Table 3

Grazing Reduction Summaries for Five Allotments

| Allotments | Number | Preference 1977 | | Interim Agreement 1978-79 1980 | | | | Proposed Allocation | |
|--------------|--------|--------------------|------|-----------------------------------|------------|-------|-----|------------------------|------------|
| | | AUMs | % | Active | Reductions | AUMs | % | Active | Reductions |
| | | | | AUMs | % | AUMs | % | AUMs | % |
| Alkali | 101 | 13361 | 100% | 11355 | 15% | 11355 | 15% | 7481 | 44% |
| Allot. Two | 201 | 8742 | 100% | 7431 | 15% | 6382 | 27% | 4214 | 52% |
| Allot. Three | 202 | 12238 | 100% | 11141 | 9% | 11141 | 9% | 9421 | 23% |
| Buck Brush | 218 | 4324 | 100% | 3704 | 14% | 3704 | 14% | 3154 | 27% |
| Westfall | 227 | 126 | 100% | 126 | 0% | 126 | 0% | 107 | 15% |
| Total | | 38791 | 100% | 33757 | 13% | 32708 | 16% | 24377 | 37% |

24-4 The proposed reductions in the forage allocation summary in Table 1-2 for the five allotments is not supportable by: (1) The most current and reliable field data (utilization); (2) Apparent Trend data (EIS Appendix D-1); or, (3) Other published documents concerning the Vale District and range research investigations.

24-5 Livestock grazing provides the only practical tool to manipulate vegetation on the public lands. Grazing treatments most often can be successfully applied without instigating complicated management systems. Vegetation has been stimulated by grazing to be healthy, productive, and available in desired quantities and combinations by employing basic simple grazing systems. We contend that such a program has been established on the allotments. Future adjustments, upward or downward, should be determined from the ongoing cooperative range monitoring program set forth in the Interim Agreement, not forage allocations proposed by the Draft EIS.

EIS Categories Which Need Support or Clarification

1. Grazing Systems

Recommended utilization levels are too conservative (page 1-13, 20, 22, 22).

Proposed grazing systems for the five allotments are too complicated and would not be cost effective (Table 1-6).

2. Monitoring and Management Adjustments

A successful program is in practice on the subject allotments and should be continued. The same caution expressed (p 1-27) for increases should be applied to reductions.

3. Proposed Action and Alternative

Alternative Four appears to be the best option based upon the Summary Comparison (Table 1-10).

The Interim Agreements provide an implementation and management vehicle superior to listed options.

4. Water Quality

Standards are being met under the current management on the allotments.

5. Wildlife

24-6 Wildlife habitat and forage has already been

properly allocated and provided for under the current situation (p 2-18, 2-26).

Conclusions of change in condition and trend of wildlife habitat in riparian zones (Table 3-8) is highly speculative. Acreages of 20% unknown condition and 60% unknown trend are distributed along with reportedly known ratings under the various alternatives. The comparison must be regarded as "wishes and dreams" and nothing more.

Economics

The conclusion of impacts for Alternative 4 (p 3-61) is incorrect with respect to environmentalists and wildlife enthusiasts, if the true perspective of Alternative 4 was presented. Specifically: Big game forage has already been allocated; riparian protection required by Federal and State water quality standards is adequate to provide good riparian treatment; the range livestock sheep industry no longer exists to provide sheep for grazing the steep slopes; and, livestock grazing of wildlife enclosures one out of every three years would stimulate browse growth and thereby reduce the likelihood of vegetation stagnation occurring (See Tueller, JRM, 1979). (Response to page 1-41)

A modification of Alternative 4 to leave wild horses in Hog Creek area of allotment 203 should dispell any horse enthusiast concerns.

The slight modification suggested would: Minimize opposition; result in the best economic conditions; would allow basic wealth production to be favored; and enhance local and national production and income.

COMMENTS ON IRONSIDE EIS

By
E. Lamar Smith, Ph.D.*

1. Vegetation Allocation

a. The amount of livestock forage available for allocation was determined mostly by the Ocular Reconnaissance Inventory Method. Forage produced on "areas unsuitable for livestock grazing" was eliminated. (pages B1-4, B1-9). Available forage (AUMs) calculated in this manner is then allocated to livestock, wild horses and wildlife under the various alternatives (Table 1-2). The number of AUMs calculated by this method reflect the specific dietary preference (PUPs), grazing habits (utilization cuts) and intake (PAD) for a given kind of animal (e.g. cattle) and thus the AUMs calculated for one kind of animal cannot be directly converted to AUMs of another, as was apparently done in this EIS. At any rate, there is no indication of conversion ratios used between cattle, horses, deer and elk, nor how big game numbers were arrived at to make such conversion.

b. The inference that under Alternative 1 no allocation of vegetation is made to either wildlife, horses or non-consumptive uses is incorrect and misleading. The Ocular Reconnaissance Method establishes proper use factors for each species. For the key forage species this factor is usually 50-60%; for less palatable species it is lower (The proper use factor is the percent use achieved on each plant species when the range as a whole is properly grazed). This means that 40-50% of the production of key species and larger percentages of all other species remain on the site when it is properly used by cattle. (On p 2-6 it states that forage production is 14 to 37% of total production). Therefore more than 50% of the vegetation is "allocated" to nonconsumptive use. Other animals may also use this vegetation to the extent that their dietary preference is different from cattle.

A related factor is that wildlife and wildhorses may use different parts of the range than cattle. Since cattle-grazing pattern has already been considered in the calculation of forage production (i.e. by suitability criteria and utilization cuts) there is forage available in unsuitable or less-than-completely utilized areas which may be used by wildlife and/or horses. On page 1-2 this is recognized by the statements: "In most areas of the Baker District, forage needed to support big game is found on areas which have been determined unsuitable for livestock grazing. Where forage from unsuitable areas would not be sufficient, additional allocations are proposed for big game." There is no indication how it was determined that forage on unsuitable areas would be insufficient, how much additional forage was required for big game, or to what extent this additional requirement is directly competitive with forage used by cattle.

* E. L. Smith. Ph.D. Range Management. Associate Professor of Range Management, University of Arizona, Tucson, Arizona.

c. Figures presented in Table 1-2 indicate that forage is presently under-allocated in 51 allotments and over-allocated (by 30%) in 151 allotments. As stated on p 3-3 "The vegetation allocation (Tables 1-2 and 1-11) inherent in the proposed action and the alternatives determines the degree of utilization of the key species." It is also stated that "Under Alternative 1, utilization of the key species would continue heavy to extreme on 63 allotments". The 63 allotments are those where significant livestock reduction is scheduled. However no data on present utilization of key species is presented.

Data available from other sources on Allotments 101, 201, 202, and 218, all scheduled for reductions, show that utilization on key species during the 1978 and 1979 grazing season did not average in excess of levels agreed upon by the permittees and BLM. In some instances use levels were substantially lower than what is usually considered "proper", which indicates an underallocation of forage. These data apply only to the four allotments listed and do not mean that the same conditions exist on all other allotments scheduled for reductions.

2. Alternative 3 differs from the proposed action mainly in the manner of implementation. It represents a much more reasonable approach than the proposed action. The alternative suggested at the public meetings (p 1-29), but rejected by BLM, seems even more reasonable. The reasons why these are more reasonable approaches are:

a. Reductions scheduled under the proposed action may be phased over a 3-year period anyhow but the amount of reduction is based solely on an inventory of forage available. Range forage inventories are not precise methods of determining carrying capacity. This fact is recognized on p 1-27 (last paragraph) where a cautious approach to granting of increases is outlined. An equally cautious approach to decreases seems warranted, given that they have an adverse impact on economic return.

b. Reductions (or increases) based on monitoring of the degree and pattern of utilization, along with monitoring of trend, are more reliable than those based on inventory. Some reductions may be found to be unnecessary.

c. There is no reason to believe that extreme urgency in grazing reductions is warranted. Data presented in the EIS indicate that (1) range trend is upward or static on 85% of the area (p D1-D5), (2) Water quality generally meets State standards (p 2-17) and (3) Wildlife populations are generally at reasonable levels and either stable or increasing (p 2-23, 2-24).

3. Why isn't Alternative 4 the preferred alternative? It is the most desirable alternative in terms of both short and long-term economic impacts (Table 1-10). The differences in environmental impact between this alternative and the proposed action are relatively minor. Presumed negative impacts (compared to proposed action) are mainly on riparian zones and fish habitat and these are mostly of minor degree. Increases in poor range condition is less under Alt. 4. Projected declines in deer and elk habitat (Table 1-10) are not explained but are hard to reconcile with projected increases of income from hunting and fishing.

4. There seems to be some confusion about what is meant by "ecosite" condition and trend:

a. Apparently "ecosite" is a coined, new word which refers to the established concept of a range site.

b. Ecosite condition is determined by comparing present vegetation composition by weight to that of the climax vegetation for the site. Trend is measured as toward or away from the climax. (p G-3, p B 1-1, p B1-2, p 2-6, p 2-7). This is in agreement (except for the word "ecosite") with the National Range Handbook.

c. On page 2-6 it states "Ecosite condition is an expression of the current productivity of an ecosite in relation to its potential productivity." This is not the same thing as comparing species composition. For example, on p 2-2 annual vegetation production is seen to be inconsistently related to condition i.e. on some sites it declines from early to climax and on others it increases. Overall, there isn't much relationship of productivity to ecosite condition (p 2-2, p 2-5). Vegetation cover also does not change much in relation to ecosite condition (p 3-17).

d. Apparently then, the statement quoted above that condition relates to productivity only has reference to production of forage species. Thus, on p 3-16 (see also p 3-15) it states that "Forage production is highly dependent upon the composition of the key species and is thus also related to ecosite condition." "This relationship is due to the key species being the preferred forage species". Since forage preferences differ among animals, presumably the key species would also differ (p G-4). It seems improbable that forage production for all animals could increase with range condition, rather some would increase and some would decrease (p 3-31). Since "forage" was related to livestock (specifically cattle) carrying capacity, it must be assumed that the key forage species mentioned are those for cattle. But there is no known ecological reason why good forage species for cattle should increase in percent composition as plant succession proceeds from early stages to climax. Is ecosite condition a measure of departure from climax or of livestock forage productivity?

- 24-15 e. The same confusion enters into the rating sheet for apparent trend (p B1-3). The sections on VIGOR and SEEDLINGS mention "desirable" and "undesirable" plants. Desirable for what?
- 24-16 f. On p 3-11 it states that "In some areas where shrubby species now dominate, little increase in herbaceous key species would be expected within 30 to 70 years unless wild fires or other actions occurred to reduce the composition of shrubs". Was this considered in the projection of changes in range condition and forage production under the various alternatives? (e.g. Table 1-10).
- 24-17 g. If introduced perennial grasses are to be considered equivalent to native grasses in determining ecosite condition, why would a seedling only change from early to late ecosite condition, not climax? (p. 3-15).
5. Wildlife
- a. "In general, the proposed action improves habitat conditions, resulting in slight benefits to most species" (p 3-23). The reason benefits are "slight" is apparently because existing livestock use is not a limiting factor for big game (see p. 3-30, 3-31). Changes in vegetation resulting from any of the alternatives would be good for some small animals and bad for others. (p 3-31).
- b. In spite of the above conclusions there seems to be a focus on detrimental effects of grazing by emphasizing riparian zones. Although the importance of riparian zones is recognized, the discussion and data presented on pages 3-25, 3-26 and 3-27 give the impression that wildlife habitat and riparian zones are practically synonymous.
- 24-18 c. Table 2-6 shows acreages of riparian zones in various conditions for wildlife habitat. On page 2-23 it states that riparian zones used as travel lanes for elk are often in poor or fair condition. However on p 2-24 (and elsewhere) the poor condition of riparian zones is attributed only to cattle. It seems that damage by elk, wild horses and even deer could also be implicated.
- 24-19 d. It is difficult to understand how the projections of condition and trend shown in Table 3-8 were made. The present trend of 50% of the riparian area is "unknown" and the condition of 364 acres is also "unknown". Now if the effects of present management (i.e. trend) are largely unknown, how can cause and effect relationships that allow projections into the future be established? How can those areas presently classified as "unknown" condition be projected as anything but "unknown"? What does it mean to say that

24-19 in the future 317 acres would have an unknown trend under Alternative 1 but only 8 acres under Alternative 2? On what basis are acres transferred from the unknown category to poor, good or excellent condition?

24-20 e. Criteria for Evaluating Wildlife Habitat in Riparian Zones (Appendix B4) appear to mix up several different concepts. It is stated that "The criteria for the ratings were based upon the variance from potential climax of the current successional stage". This statement doesn't make much sense. It implies that each "successional stage" has a different "potential climax". If the criteria are supposed to be based upon departure from climax, then the rating system given (p B 4-1 and in photos on B 4-3, and B 4-4) does not adequately serve this purpose. The rating system confuses condition, trend and utilization. For instance, the phrases "successions progressing or stable" and "regressing or nearly so" refer to trend, not condition. The references to seedstalks, hedging, grass "clipped", "mown appearance" etc. relat to current utilization and, while this may be related to wildlife habitat value, it is not a rating of "variance from potential climax". The photos likewise may represent a progression of habitat desirability but they, in no way, measure condition relative to a potential. Potential has to be defined on a site basis and these are clearly different sites representing differences in stream flow, probably altitude, and soil type. For instance, the photo of excellent condition (B 4-3) represents a gravelly riverwash with abundant moisture for trees, while the one in "poor" condition (B 4-4) is a moderate textured alluvial soil with completely different moisture relationships and potential plant community. (The inclusion of cattle in this picture is an attempt to bias the reader).

f. In summary, the statements on wildlife are backed up by very little data and the interpretation of much of this data presented is questionable.

6. Erosion

- 24-21 a. How was it determined what percent of streambank erosion was from livestock or other causes (p 2-12)?
- 24-22 b. The two factors which account for almost 1/2 the total sediment yield factor rating (p B 2-4) are "upland erosion" and "channel erosion". Yet these factors were essentially "dry-labbed" (p B 2-3). Is there any information to show the interaction between range site, erosion class and actual erosion? Are erosion and sediment yield considered to be the same thing?

24-23 7. On page 3-7 it states that "Some woody species ... are damaged when grazed heavily in the fall because stored food reserves are lost". Are there any data to back up this statement? Is there evidence that fall regrowth of key grass species under a deferred system would result in reduced vigor the following year (p 3-7)?

24-24 8. p 1-32 Why would the proposed action have the "+L" effect on colliforms while ALT 3 has a "L" effect?

24-25 9. p 2-1 Are ecosite and range site the same? Why not use one word or the other?

24-26 10. p 2-22 If bobcats are "relatively common" why are they being considered for T/E status?

24-27 11. p 3-12 "Plowing would reduce herbaceous species to a lesser degree than would spraying with 2,4-D". This may be true of forbs but not grasses.

24-28 12. p 3-17 "fibrous-rooted perennial grasses". Is this modifier intended to imply that there are non-fibrous rooted perennial grasses or that annual grasses are not fibrous rooted?

24-29 13. p 3-17 In the 13th line from bottom of page - shouldn't soil moisture be higher, not lower?

24-30 14. p 3-17 In the 10th line from bottom - no increase in total ground (cover)? is expected.

24-31 15. p 3-18 What is an "exclusion grazing system"?

24-32 16. p 3-18 Under "Impacts to Riparian Vegetation" it says that allowing woody species to increase will also benefit the remaining herbaceous species. How?

24-33 17. p 3-40 The assumption is made that the proposed action will enhance visual quality and this will result in increased visitor use. Is there any evidence that increased visual quality will cause an increase in sightseers? Aren't questions of access and gasoline prices likely to be just as important? Are these considered in the projections made?

24-34 18. p B 1-1 If plant species composition was determined by clipping and weighing on "a statistical sampling bases" why were no confidence intervals reported on such data? If production by species was measured on a weight basis, why were AUMs determined from Ocular Reconnaissance?

24-35 19. p 1-15, Table 1-6 The footnote 1/ in the "Spring" column heading apparently doesn't belong there.

24-36 20. p 3-5, line 7 Should be Table 1-6, not Table 1-11.

24-37 21. p B 1-1 line 14 - composition in climax condition?

24-38 22. p B 1-7, footnote 2/ - be utilized 75% of the time?

24-39 23. p D-1 - Allotment number 501 should probably be 201.

COMMENTS ON IRONSIDE EIS
By
Donald W. Hedrick, Ph.D.1/

- 24-40 The DEIS stated effects of livestock grazing on crested wheatgrass is not correct. Without heavy use in the grazing season by livestock you cannot expect late winter or early spring use by deer. Experimental evidence is available from the Silver Lake Mule Deer winter range in central Oregon that livestock use is essential for the production of winter active growth of crested wheatgrass and squirreltail useable by mule deer in March and early April. Without livestock grazing on these two species, no deer use was obtained on crested wheatgrass and squirreltail in the transition period before the game animals leave the winter range. The nutritive value of this early grass production is essential to insure a proper diet for game animals in this critical period.2/ Similar results could be expected from Sandberg Bluegrass and squirreltail on ranges where those grasses are plentiful and are grazed during the spring season.
- In regards to management of crested wheatgrass, it should be grazed to achieve maximum range improvement on native vegetation. Work by Sharp (1966) Vegetation and animal responses to grazing crested wheatgrass at three intensities and two seasons in southern Idaho (PhD dissertation submitted to Oregon State Univ. 135 pp.) has been a useful reference as well as Hyder and Sneva (1963) Morphological and physiological factors affecting the grazing management of crested wheatgrass. Crop Science 3:267-271.

- 1/ D. W. Hedrick, Ph.D. Range Management. Dean, Natural Resources, Humboldt State University, Arcata, California.
- 2/ Urness, Philip J. 1966. Influence of range improvement practices on composition, production and utilization of Artemisia deer winter range in central Oregon. A dissertation presented to Oregon State University for partial fulfillment of Ph.D. requirements. 183 pp.

Quote from p. 135.

"Crested wheatgrass provided greater amounts of green forage in winter than native species because of its characteristic fall regrowth with favorable climatic conditions. Deer actively sought this material throughout the winter period. Production of green crested wheatgrass ranged from 37 to 126 and average 75 pounds of oven-dry material per acre. Higher production was directly related to heavy use of seedlings by cattle the preceding growing season".

An important quote from p. 126 of Sharp's thesis: Stand density, frequency and yield were maintained as well under moderate spring grazing (65-70% removal of current annual growth) as under light grazing; gain per animal was only slightly less and gain per acre was only four pounds less than under heavy grazing. As far as could be determined, grazing intensity in the fall had little effect on stand density, plant vigor or annual yield of crested wheatgrass*. Recommendations from Sharp's thesis are presented below.

From Lee Sharp's PhD Thesis

RECOMMENDATIONS

Range forage needs for successful operation of a ranching enterprise vary widely in the Intermountain region. These needs can be more effectively satisfied and suitable programs can be developed when the criteria mentioned in the previous section are considered.

If the management program calls for spring use alone, stand density and productivity can be maintained if about 65 percent of the annual production is used by the end of June. Residue levels should approximate 150 to 200 pounds at this time. Grazing beyond 65 percent utilization probably would not be extremely detrimental for one or two seasons but the occurrence of dead centers in the crown of the plant, the beginning of fragmentation and/or a more patchy distribution of crested wheatgrass will indicate that grazing was excessive.

Livestock operators who use the same area in the spring and again in the fall will obtain greater animal gains, greater gains per acre and higher rates (50-65 percent utilization) followed by heavy use in the fall. Forage production will remain high under the light or moderate spring grazing and the development of coarse unpalatable stems will be minimized by close grazing in the fall.

More effective management programs are possible if the area to be grazed is divided into two or more fields or pastures. With two or more fields, grazing can be alternated between or among fields in such a way as to prevent grazing during successive years at the time herbage yields or root growth and production are affected most.

The general pattern of grazing in a two field arrangement would be to start grazing in one field in early or mid-April and graze until the latter part of May. The animals would be moved to field two after this time. In the second year, the two fields would be grazed in the reverse order. Grazing during the first period should be regulated so as to have close cropping by the end of May. The stem apex (growing point) appears above the crown level of the plant about mid-May and grazing until late May would permit the removal of this growing point on a majority of the plants. New shoots develop from basal buds after removal of the growing point and these are finer, more leafy, more palatable and more nutritious than the original stems. This new crop of stems may be used again in late

summer or fall. At the time the animals are moved to the second field in late May, crested wheatgrass has attained the greater part of its seasonal growth. Since it will take time for the animals to graze off any great quantity of herbage, growth will continue, with a minimum of disruption, until soil moisture becomes deficient. Grazing may continue until the forage is used to the desired degree. The major reason for leaving any quantity of forage in field two at the completion of grazing is to provide a residue of forage for the beginning of grazing the following spring. Since growth is slow in early and mid-April, the limited new production of crested wheatgrass must be augmented either with a standing residue of forage or other supplements unless the size of the fields can be easily varied from year to year.

The division of the seeded area into three fields would make possible a more effective management program for crested wheatgrass than two fields. The main advantage would be the greater flexibility in making management decisions regarding adjustment of numbers and the length of time supplements would have to be provided.

The sequence of grazing in a three field program would follow the pattern indicated below.

| Year | Field A | Field B | Field C |
|------|---|---|---|
| 1 | Graze early in growing season to May 20-25 and again in late summer or fall. | Graze from May 20-25 until used. | Graze in late summer or fall leaving some forage for use in the following spring. |
| 2 | Graze from May 20-25 until used. | Graze in late summer or fall leaving some forage for use in the following spring. | Graze early in growing season to May 20-25 and again in late summer or fall. |
| 3 | Graze in late summer or fall leaving some forage for use in the following spring. | Graze early in growing season to May 20-25 and again in late summer or fall. | Graze from May 20-25 until used. |

This pattern is similar to the two field program except that one field is deferred from grazing use during the growing season once in three years. As in the two field program, the field grazed last in the fall will be the first grazed the following spring and so some herbage should remain (200-300 pounds) to provide a sufficient quantity of forage during the period of slow growth in early April.

With this program, low forage production because of poor growing conditions can be partially compensated for by moving the animals sooner than the indicated dates. By the time the third field in the rotation is to be grazed, annual production will generally be known and arrangements can be made for additional grazing land, purchase of supplements, or sale of animals. Extremely close grazing may be practiced for a year or two without exceptional harm to the grass stand but animal gains will be sacrificed. The sacrifice of animal gain and gain per acre, however, may be more desirable than any drastic reduction in animal numbers.

Stocking rates under the two and three field management programs would average about one or one and one-half acres per animal unit month based on production characteristics at Point Springs. Stocking rates on crested wheatgrass seeded range in areas with better developed soils would very likely be higher than those currently being used at Point Springs.

Proper grazing use of crested wheatgrass under any of the programs that may be developed can be determined by observing the change or lack of change that occurs in the vegetation. Indications of decreasing vigor and declining productivity are dead centers and fragmentation of individual plants of crested wheatgrass, decreased frequency of occurrence and an increase in the number and frequency of annual plant species. When stands are not grazed to capacity, an exceptional number of coarse, ungrazed (self) plants occur.

24-41 There are numerous evidences of contradictions of the effects of grazing systems on various resource values. For example, under spring or spring/fall grazing, p 3-25, considerable improvement can be expected in riparian conditions. Under rest rotation, however, improved habitat during the rest year is often lost with severe livestock use the following years.

The EIS fails to point out that the most successful grazing system is the simplest one to reconcile plant requirements on the one hand with those of animals on the other.

24-42 Appendix B1-1 is an example of inconsistency in figuring composition allowable under SVM rating. In this table, Idaho Fescue has maximum composition by weight in climax of 22% yet inventory revealed 17% of which only 7 was accepted in rating. These data contained in Column 1 are supposed to be taken from comparable sites in climax or near climax condition. There is not indication or substantiation for these figures in the EIS.

However, all these figures are only a starting point. Accurate use figures, utilization data and the only way of determining the reliability of the initial stocking proposed in this or any other EIS.

In Appendix C under Monitoring Procedures, it is clearly spelled out that key representative areas in each allotment will be used to measure utilization and trend. According to those directions in paragraph 5 "Decisions affecting future stocking levels or changes in the grazing system will consider the trend in ecotone condition along with stocking rates in relation to the estimated carrying capacity, climatic conditions and results of utilization studies."

Riparian Zone - Wildlife Habitat Evaluation shown in Appendix B4-3 and B4-4 is a selective series showing for the most part distinct ecological conditions rather than effects of grazing. For example, the difference between excellent and good wildlife habitat is primarily a good interspersation of conifers and broad-leaved shrubs in the excellent photo versus a nearly shrub free section of a stream tabbed as good wildlife habitat.

Monitoring procedures in Appendix C are just as useful in checking compliance on all allotments as well as those intensively managed. Furthermore, it should be added that no arbitrary allocation of forage is any more than a starting point and thereafter adjustments should be based on performance rather than conventional wisdom of the original allocation. With this point in mind it seems that data obtained on a series of allotments used by WRS clients substantiates the decision of a voluntary reduction to improve range conditions immediately rather than awaiting the development of a complicated AMP. Recognition of the value of cooperative range users may be just the psychological lift needed to encourage adoption of good range use practices that will hasten improvement of range conditions to the benefit of all users of public lands.

When a relatively small area of riparian habitat is identified as critical for a particular allotment it is important to remember that adjustments in grazing on the large percentage of other range holds the key to what eventually happens along this narrow strip. When managing these areas effectively it is important to exercise great flexibility in grazing use so that maximum benefit can be exerted on this small area. This means that the most complicated systems with several pastures grazed in fixed seasons don't provide the leeway needed to adjust to results of management not anticipated at the start up of the AMP.

It is ironical in the case of WRS clients who have voluntarily adjusted their grazing use to improve range conditions and assure a sound future for their operations, that they should be penalized by having to accept further arbitrary reductions that are not justified on the basis of utilization monitoring that has been undertaken over a 2 year period by BLM personnel. If the BLM is serious in obtaining better management on the resource they should encourage and reward this kind of cooperative behavior rather than discourage it by treating the interested user with the same brush as disinterested users who have not exercised any individual initiative.

In summary, the effectiveness of grazing management to improve wildlife habitat as well as other resource values, will largely depend upon using livestock as a tool in accomplishing

objectives that are either too expensive to attack by other means, such as large scale improvements, or cannot be practically applied on extensive areas. This approach requires the cooperation of livestock users who ultimately decide whether planned measures will be successful or not in improving range conditions. Encouragement of those operators who have demonstrated a genuine interest in resource management should result in maximum benefit to the general public through improved watershed, wildlife and recreational values for all users.

COMMENTS ON IRONSIDE EIS

By
Roger Corrigan *

Chapter I

A. Grazing Systems

24-43

1) Spring Grazing, Pg. 1-13. There is no need for two years of initial rest on the five allotments prior to implementation of the spring grazing treatment. It has long since been established that early spring grazing will promote improved plant vigor and composition of key species when the grazing period ends while (1) there is still ample soil moisture to allow the key species to complete their full growth cycle, and (2) utilization of native key species does not exceed moderate use. Early spring grazing has been used successfully to (1) decrease competition between annual and perennial key species, and (2) to promote increased vigor and composition of perennial key species. A good example of this type of grazing treatment is pasture 1 of the Sands Basin Allotment, Boise District, Owyhee Resource Area. This pasture is located south of Marsing, Idaho in a low precipitation zone. Condition of the pasture is good to excellent, as determined by BLM modified SVM range survey procedure in 1978. The pasture has been grazed in early spring every year for nearly ten years.

2) Deferred Rotation Grazing, pg. 1-20. The need for a 50% utilization limit for those pastures in early or middle ecotype condition is unwarranted. There is no reason 60% utilization cannot be allowed in a pasture presently in early or middle ecotype condition, if the pasture in question shows a static or upward trend. The range manager may also desire a higher utilization in a pasture if his management goal is to maintain present condition. The 50% utilization limit completely eliminates management flexibility. The EIS contains no justification for this utilization limit nor reasons for proposing this type of grazing system. A deferred rotation grazing system will meet the objective for improvement of ecotype condition.

3) Figure 1-3. Four pasture rest rotation system. Why be limited to only one type of four pasture system? An alternative four pasture rest rotation system to consider would be:

Year 1 - Graze June 1 through July 15: Follows full year of rest (year 4). Aids in seedling establishment by allowing seedling root development.

* Roger Corrigan. B.S. Range Management. BLM employment over six years in range management. Now ranching in Westfall, Oregon area.

Year 2 - Graze April 16 through June 1: Ending grazing by June 1 allows regrowth and improved vigor during the second year.

Year 3 - Graze July 15 through October 31: Seed production enhanced by year 2 regrowth and year 3 deterrent. Provides seed trampling, removal of wolf plants and plant vigor stimulation.

Year 4 - No grazing - Rest: Provides for seedling establishment, plant vigor stimulation, and litter accumulation.

This type of system is superior to the one identified in the EIS because it provides for nearly 2 years of root development of seedlings rather than 1 year and grazing from 6/1 to 7/15 is usually the most harmful to plant vigor; consequently, if you graze during this period prior to the fall grazing treatment seed production may not be as high as it could be if grazing occurred early, 4/16 to 5/30 prior to the fall grazing treatment.

4) Table 1-6, page 1-15. To change the grazing system on allotment 218 does not follow good range management as it is improving under the present grazing system. Monitoring and management adjustments - I doubt the BLM's seriousness when they state that climate, actual use, and trend studies will be used to make adjustments in the grazing system and stocking rate. This is what we were told in 1978, but the EIS has disregarded this information and has proposed an arbitrary reduction on allotment 218 even though the utilization is within the level agreed upon.

Chapter Two

Ecosite Trend & condition - Trend over a short period may fluctuate up and down from year to year due to climatic fluctuations. The only way to obtain an accurate estimate of trend on a given pasture is over a series of years, the more years of data the more accurate the results.

24-45 The EIS statement of trend being a recent change in ecotype condition is confusing. For example, if over a five year period the individual annual trend readings were up, down, static, up, and up, the overall trend for the period would probably be determined as upward. When the results of a one year observed apparent trend study found 52% of the area to have no trend in a low precipitation year, it seems likely that over several years of collecting trend data the results would show an upward trend over a large percent of this area as stated in the USDA Forest Service Resource Bulletin PMW-70 1977 by Harold P. Heady and James Bartolome.

The observed Apparent Trend form used as shown in Appendix B would tend to confuse an inexperienced range conservationist to the point they might unknowingly rate the trend lower than it actually is, i.e. seedlings of bunchgrasses are very uncommon most years. However, bunchgrasses commonly break apart (caespitose) at the crown. Especially if the interior of the plant has been overgrazed in the past and is beginning to respond to good management. Surface litter can very easily be confusing. If the pasture has been grazed to a 60% utilization level there would be much less litter than on an area rested. Bunchgrasses naturally form a pedestal as they grow and accumulate litter at the base and may be mistakenly identified as moderate plant pedestalling. Gullies as a category should be excluded for the reason that range examiners frequently misidentify a natural drainage as a gully.

Chapter 3

Vegetation Allocation and Grazing Systems - The EIS statement that "under Alternative 1, utilization of the key species would continue heavy to extreme on 63 allotments" is unsupported. Utilization data on allotments 101, 201, 202, 218, and 227 all indicate use levels for the 1978 and 1979 grazing seasons ranged from light to moderate use, well below allowable limits. Allotments 202, 218, and 227 are identified to need an additional reduction of approximately 15% below the 1978 licensed stocking rates in spite of valid data substantiating that they are stocked below the proper levels.

Appendix C

The proposed monitoring procedures will not be adequate to evaluate trend or condition of an allotment or even a pasture within an allotment. To obtain a reliable overall evaluation of condition and trend of a pasture, several plots in different areas must be established. Studies on one key area will simply evaluate conditions on that one area, not the entire pasture.

Appendix BI-2

Trend was determined for the EIS draft by the use of existing photo-trend plots and observed apparent trend write-ups. Heady and Bartolome found the existing photo-trend plots to be inadequate for evaluating range condition and trend on the Vale District.

"Proper evaluation of an entire management unit could not be made from examination of one to a half dozen of these small plots. Photos yielded valuable information and should be continued. Mapping of the small plots, however, is time consuming and of questionable accuracy because of infrequent sampling by a wide spectrum of individuals, some with little

interest in the assignment, and none with adequate instruction. A more reliable method for collecting adequate condition and trend should be found. A second fault with the present plot is that most were located close to water and other places of livestock concentration, hence they do not represent entire management units. A third problem with these plots stem from the practice of including cheatgrass in the trend sample, thus confusing high yearly variability in cheatgrass stands with long term trends in range condition. Annuals should be included in the analysis as important parts of the vegetation, but their small and ephemeral nature makes them difficult to map and the maps are of doubtful meaning. A fourth problem is inadequate plot size. A yard-square plot included less than one big sagebrush plant and about three of the desirable perennial bunchgrasses on the average. A large number of these plots would be needed on each site in order to obtain an accurate estimate of range condition and trend." (USDA Forest Service Bulletin PNW-70 1977, of the Vale Rangeland Rehabilitation Program: The Desert Repaired in Southeastern Oregon, Harold F. Heady, James Bartolome.)

Heady and Bartolome (1977) also stated that "Although we do not have survey data, we believe that at least 50 percent of the district is in good or excellent condition and that the trend of nearly all the district is either stable or improving". (pg. 93)

This is an interesting contrast to the DEIS document that claims 2% in excellent condition, 18% in good, 28% in fair, 30% in poor, and no data on 22%.

The proposed monitoring procedures for condition and trend, although different than those previously used will result in the same unuseable data due to the small area they represent.

The Ironside Grazing Management DEIS is negatively slanted towards livestock grazing. Only a few years ago the Vale project came to an end. The Vale project was reportedly aimed at optimizing, to the fullest extent, all legitimate uses of the Public Lands. Now a new program has been proposed under the heading of the Ironside Grazing Management EIS which seems to be asking for the breakdown of the management goals of the Vale Project. The Vale Project established grazing systems and grazing reductions (many reductions have since been restored). At the completion of the project a report of the success of the program was completed which in essence stated that at least 50% of the district is in good or excellent condition and that nearly the entire district was improving or in a stable trend. The proposed action of this Ironside EIS says this is not true. Does the Ironside EIS intend to establish that the Vale Project was a FAILURE?

BLM's stated policy has been to manage for multiple use of the public lands. However, the proposed action promotes single uses in certain areas at the expense of the dominant use, livestock grazing. If uses are to be prioritized livestock grazing and local economics should be given greater consideration.

Responses to Letter No. 24

- 24-1 The figure 11,355 (ADMs) includes both Allotments 101 and 157 for the present livestock active use. The figure 10,492 (ADMs) is correct for Allotment 101 as shown on Table 1-2 page 1-3 of the DEIS.

The figures displayed in Table 2 of the comment letter include the utilization percentage in pastures being rested, and present an average of utilization in all pastures. This method of utilization calculation when applied to rest rotation system seriously understates the measured utilization and thus would not be useful in determining proper stocking rates. Also the figures displayed in the reviewer's Table 2 do not include adjustments that were made to correct production for climatic variations.

In addition, the information on Table 2 for the Alkali Allotment 101 is not correct because it applies to Stripe Mtn. Allotment 157. The average utilization for Allotment 101 in 1978 and 1979 was 40 percent and 45 percent, respectively.

- 24-2 The Vale District intends to honor its commitment to the Interim Agreements by continuing the existing management until Allotment Management Plans (AMPs) are implemented. The AMPs will be developed through consultation and coordination with the individual permittee.

The agreements were voluntarily entered into by the permittees and have been beneficial by slowing down declining range conditions in some allotments and improving conditions in several others.

The grazing management practices as described in the agreements would be considered in the development of AMPs. See response to written comment 18-2.

- 24-3 There was no intention to present a negative or positive tone in the EIS. Expected impacts were presented impartially and quantified whenever possible.

- 24-4 (1) The utilization data gathered in 1978, 1979 and 1980 were not available at the time the proposed action (including the reductions) was developed. These data will be used, however, in making the final decision.

(2) Appendix D shows 172,506 acres to have an upward trend, 526,000 acres static and 127,508 acres a downward trend. An area may not be in satisfactory condition even if the trend is static. Presently 584,319 acres in the EIS area are in early or middle ecotone condition; management objectives for the majority of these acres are for achieving late ecotone condition. See comment 5-4.

(3) See response to comment 24-48 concerning Heady and Bartolome (1977).

24-5 Future livestock adjustments will be based on climate, actual use, utilization and trend studies (see page 1-27 in the DEIS, Monitoring and Management Adjustments).

24-6 At present, only limited amounts of livestock forage have been allocated to wildlife on an allotment basis (page 1-2). Proposed allocation of livestock forage to wildlife would help prevent combined overgrazing of the range and decrease forage competition mentioned on page 2-23.

24-7 Additional livestock forage AUMs are needed by big game for food and cover in certain areas. These AUMs are not allocated to wildlife in Alternative 4. The provision for a shift to sheep grazing on steep slopes came from public input during the scoping meeting held in Baker. Riparian condition is presently mostly poor or fair (see Table 2-6 in the DEIS): about 85 percent of riparian vegetation is predicted to have static trend (remaining poor or fair) under Alternative 4 (see Table 3-1 in the DEIS).

24-8 Livestock AUMs were not directly converted to wildlife AUMs. Big game unit months were converted to AUMs using the following conversion ratios:

| | | |
|------------------------|---|------------------------|
| 5.3 Deer Unit Months | = | 1 AUM (Baker and Vale) |
| 7 Antelope Unit Months | = | 1 AUM (Baker and Vale) |
| 2 Elk Unit Months | = | 1 AUM (Baker) |
| 1 Elk Unit Months | = | 1 AUM (Vale) |

ODPW supplied big game numbers and season of use. Only competitive AUMs were formally allocated to big game. Competitive AUMs are forage composed of palatable shrubs, grasses and forbs eaten by both livestock and wildlife. The portion of total big game forage which is competitive is based on the dietary overlap between big game and livestock. The dietary overlap or percent competitiveness for deer ranged from 11 to 84 percent on individual allotments and was about 20 percent for the entire EIS area.

Big game was allocated forage in proportion to the percent of public land in the allotment. A mathematical equation illustrates the method used to derive wildlife AUMs.

$$\begin{array}{ccccccc} \text{Deer} & \text{Months} & & 1 \text{ AUM} & & & \text{Wildlife} \\ \times & \text{of} & \times & \frac{\text{AUM}}{5.3} & \times & \frac{\% \text{BLM}}{\% \text{Overlap}} & \times \\ \text{Nos.} & \text{Use} & & & & & \text{Allocation} \end{array}$$

The same formula with different AUM conversion factors was used for antelope and elk. See response to comment 24-10.

24-9 See response to comment 12-8.

24-10 The forage needs for wildlife were determined by prorating the number of big game animals in each herd area to each allotment and then calculating the total number of AUMs needed within each allotment to support these animals. When the AUMs from areas unsuitable to cattle, plus AUMs from plants useable by big game but not preferred by cattle, were insufficient to meet the total herd needs, the shortfall was deducted from the livestock allocation.

24-11 See response to comment 5-4.

24-12 As stated on page 3-29: In Alternative 4, the projected increase of 45,000 livestock AUMs and the possible increased use of sheep would result in significant competition for desirable shrubs and forbs. Vegetative manipulation with Alternative 4 would decrease cover on 30,000 acres (17 percent) of crucial deer winter range. See Errata, pages E-15 and E-26 for an explanation of recreation and related income.

24-13 The text has been changed to correct this error. (See Errata for page 2-6.)

24-14 Ecosite condition is a measure of departure from climax condition. However, with very few exceptions, in this area a departure from climax is accompanied by a lower percent composition and production of the principal livestock forage species. (Refer to Table 2-1.)

24-15 On the Apparent Trend form the words "desirable" and "undesirable" relate to livestock forage value in terms of palatability to livestock and reliability of production.

24-16 Yes. On page 3-14, this conclusion is used in the Clover Creek allotment analysis.

24-17 The techniques proposed for use to remove the woody species would leave enough of these plants to keep the area in late condition. Also, some of the species normally associated with climax condition would be absent following seeding. As a result, it is expected that the majority of areas seeded would remain in late condition.

24-18 Studies of fenced enclosures having wildlife (but not livestock) use, historical records and areas such as Yellowstone National Park show that wildlife use is not a major contributor to degradation of riparian habitats (Hehnke, Robert J. and Kaleigh, Robert F. 1978. Grazing and Riparian Zone: Impact and Management Perspectives. In Johnson, R. Roy and McCormick, J. Frank, eds. Strategies for Protection and Management of Floodplain Wetlands and Other Riparian Ecosystems. Washington, D.C.: USDA Forest Service).

24-19 Data which show that spring grazing improves riparian vegetation at one site was extrapolated to other sites where the same system is proposed. Grazing exclusion has resulted in good or excellent wildlife habitat. A riparian area with unknown condition and trend would be expected to improve to at least good condition with livestock exclusion. Acres for each condition class and trend were totaled and appear in Table 3-8. Also see response to comment 12-36.

- 24-20 Riparian zones were rated subjectively on their value for wildlife habitat (Tables 3-8, 2-6). Ecosite condition of vegetation in riparian zones has not been determined (See page 3-25 paragraph 2). Terms related to ecological succession were used incorrectly in the methodology.
- 24-21 During the riparian survey, certain stretches of certain streams (totaling 6.37 miles) were inventoried for streambank erosion. Causes of erosion on those stretches were determined by observation during the inventory.
- 24-22 No measurements were made of actual erosion in the EIS area. However, the PSIAC method does relate to actual sediment yield through conversion factors built into the rating system (see Appendix B2, Page B2-5 in the DEIS). The sediment yield information is most useful in showing the relative differences between topography types by using the same survey procedure over the EIS area. Erosion and sediment yield are not the same thing. Erosion is the detachment and movement of soil fragments by water, wind, ice or gravity. Sediment yield is a measurement of soil material transported in streams.
- 24-23 Both of these conclusions are based on field observations. Grazing use in riparian areas using the deferred grazing system (late summer/fall) results in extremely heavy utilization of the riparian vegetation. Grazing use under those conditions has resulted in low vigor and virtually no reproduction of the key woody species.
- 24-24 The coliforms column has been corrected for Alternatives 3 and 4. See errata for page 1-32.
- 24-25 The text has been changed to replace "range site" with "ecosite". See errata for page 2-1.
- 24-26 High fur prices have increased trapping pressure on bobcats. Trapping could decrease present populations to a level which would require protection through the Endangered Species Act.
- 24-27 The text on page 3-12, paragraph 5 has been revised. See Errata.
- 24-28 No. This modifier is not intended to imply either.
- 24-29 Yes. The text has been corrected. See errata for page 3-17.
- 24-30 The text has been revised. See errata for page 3-17.
- 24-31 The text has been revised. See errata for page 3-18.
- 24-32 The grazing management systems proposed to meet the physiological needs of woody species all provide considerable rest during the growing season. This form of grazing also is advantageous to most of the associated herbaceous species. However, a significant increase in composition of woody species would, in the long term, result in reduction of some herbaceous species.

- 24-33 Meganck and Gibbs (1979) (cited in the draft EIS) identified several interesting relationships between the visitor, management practices and the visual resource. They found that recreationists do perceive differences in the visual resource and, as a result, form opinions and make decisions with respect to their use of the environment. A majority (58 percent) indicated that their recreational use would be altered as management intensity increased or became more apparent. Further, while some publics (e.g., anglers) place a great emphasis on the visual resource, others (e.g., hunters) may not. These data provide support for the assumption that visual quality enhancement would result in increased visitor use in certain activities.

Limited access to recreational opportunities would result in low visitation to these site specific areas. However, visitor use relocation would occur and effects of access on total area-wide visitor use would be relatively minor.

Gasoline price increases may impact recreational travel. However, such price increases lead recreationists to seek opportunities closer to home. Because recreational visitation occurring in Baker and Malheur Counties includes about 90 percent from residents of the respective counties (Oregon Department of Transportation 1976), energy costs and availability are expected to result in only a relocation of some use to areas nearer home—a relocation which would not affect total area-wide use. The magnitude of this relocation was unquantifiable and this was not incorporated into the recreational visitation projections in Table 3-12.

- 24-34 Confidence levels were determined for each condition class for each of the ecosites surveyed. These levels were not given in the EIS since the ecosites were grouped for analysis purposes. AUMs were determined from aerial reconnaissance because the vegetation inventory was done during a drought year. See response to comment 3-4.

The determination of production by weight as indicated in response to comment 5-2 was completed during a very unfavorable precipitation year. Consequently, an aerial reconnaissance inventory completed in a more normal year was considered more reliable for determining stocking rates.

- 24-35 See errata for page 1-15.
- 24-36 See errata for page 3-5.
- 24-37 See errata for page B1-1.
- 24-38 See errata for page B1-7.
- 24-39 See errata for page D-1.

- 24-40 Up to 60 percent livestock use is proposed in seedings to promote deer and antelope use (See pages 1-20, 1-21). Increased "green-up" for big game from livestock grazing is stated on pages 3-29 and 3-30. See response to comment 21-5.
- 24-41 As stated on page 3-25, vegetative condition cannot always be equated with habitat condition, especially in riparian zones. See response to comment 9-15.
- 24-42 Appendix B1-1 has been corrected. See Errata.
- 24-43 The 2 years of rest prior to initiation of spring grazing is designed to allow the woody riparian species an opportunity to recover vigor.
- 24-44 See response to comment 5-4.
- 24-45 Trend is a measurement of change in species composition over a period of time. Trend for an area is calculated by comparing the key species composition measured when the study plot was established with the present species composition. Usually a valid trend indication requires 4-5 years between measurements. Trend is not calculated by averaging several annual trend estimates.
- 24-46 See response to comment 5-4.
- 24-47 As indicated in Appendix C, each pasture in each allotment contains at least one key area. If conditions warrant, more would be established.
- 24-48 About 62 percent of the public lands covered by the Ironside EIS are located in the Vale District. Heady and Bartolome (1977) also state: "the northern part of the district needs additional rehabilitation" (p. 46), and "[there is a] ... lack of forage to satisfy obligated demand in the northern resource area, especially around Vale and Ontario" (p. 135). This is the area covered in the EIS. The Vale Project concentrated rehabilitation work on the sites with the greatest potential for improvement. The northern resource areas had fewer sites with high potential than the southern part of the district, which consequently received the majority of the treatment. The vegetation survey data in the EIS reflect this difference in potential (and thus in condition) in the Vale District and include the Baker District survey data (not covered by the Vale Project).

June 30, 1980

Bureau of Land Management
Vale District
Vale, Oregon 97918

Gentlemen,

I am writing this letter as a response to the draft alternatives on grazing in the Vale District of the Bureau of Land Management. As a past summer employee of the district (1961-67), the son of a BLM permit user and long time cattle raiser of the Vale area and a professional biologist who specialized in sagebrush steppe ecology, I feel that I can speak with some degree of knowledge concerning the grazing usage on the district. I might mention that this letter is written on behalf of my father, Roy Blackburn - Permit No. 105.

In reading your draft EIS with listing of alternatives, several areas need clarification.

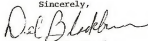
First, your methodology for establishment of baseline data on AUM carrying capacity, I feel can be seriously questioned. Since when does the Bureau use only one year, that year being the worst drought experienced by the North Great Basin in 20 years (1978), as base for determining AUM? I feel that the using of 1978 is totally invalid just as using 1980, a very wet year would have been. Perhaps a base of 5 to 10 years should have been used.

25-1

Also, in regard to the grazing practices of the Willowcreek unit (no. 105), I remember when the past association was formed and the land, now sold, was set up for grazing. I carried water for the fencing work crews. At that time, the dominant grass was bunch grass (*Agropyron spicatum*, *Poa bulbosa*, *Poa secunda* and *Festuca idahoensis*). As you well know, the Willowcreek unit has been overgrazed to the point that it now has very little bunch grass left with the dominant species being *Fragaria tectorum*. Considering the above changes, I agree that better management is needed but does that management have to have the economic impact that are suggested in the draft grazing plan? It should be pointed out that 1978 was the last year that the Willowcreek Livestock Association used the unit for grazing. So not only were you basing your data on drought conditions but the last year of an association that had a tradition of overgrazing. I might mention that my father worked for years trying to get the association to change grazing practices more in line with the range carrying capacity but was always outvoted (i.e. we only graze for three months so lets turn out twice the six month allotment.).

In final analysis, the only area that I can see where the goals of the BIM and my father differ on the management of the area are kill the brush and let native grasses return under lower grazing pressure (pre-1978 levels, current 1979-80 level or slightly lower 20%) vs. kill brush, reseed and reduce grazing level until seeding becomes established, thusly, working an economic impact on cattle growers involved. I can see why with the same end goals, a compromise cannot be worked out. Keep in mind that grazing practices have already changed and that the Willowcreek area number 105 is showing the change for the better.

Thank you your time.

Sincerely,

 Del Blackburn

C-81

Response to comments Letter 25

25-1 See response to comment 3-4.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
 Division of Ecological Services
 Portland Field Office
 727 N.E. 24th Avenue
 Portland, Oregon 97232

26

Reference: ES

July 2, 1980

MEMORANDUM

To : State Director, Bureau of Land Management, Portland, Oregon

From : Acting Field Supervisor, Fish and Wildlife Service, Portland, Oregon

Subject: Review of Draft Ironside Grazing Management Environmental Impact Statement (EIS)

We have made a cursory review of the subject draft as requested and have the following comments for your consideration.

General Comments

The statement describes the proposed action and alternatives fairly well. Although some of the expected impacts are fairly general in nature they seem reasonable considering the large land area involved. The efforts to give at least some quantitative information on the present condition of fish and wildlife habitat are commendable.

We are concerned with the range of alternatives that are presented for consideration. While the no action alternative is required under Council of Environmental Quality (CEQ) guidelines, most of the remaining alternatives are extreme positions which could not reasonably be implemented without either severe economic consequences or completely unacceptable damage to the natural resources of the area. Since the statement mentions in at least two sections that a continuation of current conditions (under the no action alternative) has resulted in overgrazing and range deterioration, only the proposed action and alternative number 3 (limit downward adjustments) appear to have any chance of being implemented. Perhaps a wider range of alternatives would give decision-makers a more reasonable set of options to consider for implementation.



Save Energy and You Serve America!

Specific Comments

26-1

Page xvi. Wildlife. The second sentence states "Long term vegetation stagnation under Alternative 2 (eliminate livestock grazing) would reduce forage available to deer and elk." While we agree that the natural trend toward climax conditions would result in some reduction of forage for deer and elk, we believe that the elimination of livestock and thus the competition for food between big game and livestock would result in long term gains for deer and elk.

26-2

Page 3-30, Range Improvements, 2nd Par. It states "Removal of sagebrush on approximately 50,000 acres would allow for improved antelope movement." While this may be true, it should also be considered that sagebrush is an important source of food and cover for pronghorn. These values may be lost if management following sagebrush removal does not include reestablishment of vegetation preferred by pronghorn.

for *Richard D. Wright*
Roger E. Vorderstrasse

Responses to comments on Letter 26

26-1 Cover, rather than food, appears to be the limiting factor for deer and elk. See response to comment 21-5.

26-2 Treatment areas would contain "leave patches" of sagebrush which will provide food and cover for antelope. Sagebrush will naturally reestablish itself on some treated sites after 10-15 years (see page 3-13). Seeding mixtures to be determined for each site would contain forbs and browse species if applicable. On-the-ground design and seeding mixtures would be coordinated with ODFW.

Response to Hearing Comments

Ontario Meeting

| | | | |
|-----|-------------------|-----|--------------------------|
| V-1 | Robert Skinner | V-5 | Michael L. Hanley Jr. IV |
| V-2 | Dr. Gary E. Smith | V-6 | Phillip Kuhl Jr. |
| V-3 | Tom McElroy | V-7 | Roger Fundley |
| V-4 | Harry L. Smith | V-8 | Ted L. Hollopeter |

Baker Meeting

| | | | |
|-----|--|------|----------------|
| B-1 | Randell C. Guyer, Jr. | B-10 | Truscott Irby |
| B-2 | Alvin Ward | B-11 | Ted McKinney |
| B-3 | Dennis Goodman | B-12 | Walt Forsea |
| B-4 | Spike Biggers (Same as letter No. 19) | B-13 | Fred Langley |
| B-5 | R.J. Steward | B-14 | Jerry McDonald |
| B-6 | Gus Markgraf | B-15 | Bob Jones |
| B-7 | Fred Phillips | B-16 | Joe Barber |
| B-8 | Darrel Thomas | B-17 | Dennis Quast |
| B-9 | Dwight Langley | B-18 | Ben Dunlevy |

Ontario Meeting

Hearing No. V-1

Comment No. 1: Permanent reductions are totally unnecessary until the trend, as well as the present status of range conditions, is firmly established.

Response: See response to written comment 5-4.

Comment No. 2: At no time did I find reference made to Class I grazing privileges or preference rights. This could possibly distort the picture of what action is really taken, because the complete history of prior reductions or increases is not presented.

Response: See response to written comment 18-3

Comment No. 3: Apparently, or at least in some instances, proposed reductions were made from the 1978 license figures which may or may not be the same as Class I privileges. This could make actual reductions much more than the stated 25 percent average.

Response: See response to written comment 18-3.

Comment No. 4: How would a 25 percent reduction in AUMs reduce total forage requirements by only 3.4 percent, unless these permittees are almost totally dependent upon the forage from other than BLM sources?

Response: Permittees in the EIS area reported herds totaling 86,179 animals. Multiplying this figure by the number of months in the year gives annual requirements of 1,034,000 AUMs. Licensed forage amounted to some 142,000 AUMs or 13.7 percent of the total. A 25 percent reduction in BLM AUMs (which account for 13.7 percent of the total) translates into a 3.4 percent reduction in forage from all sources.

Comment No. 5: The final EIS should contain a simple explanation of the projected reduction or increase, in terms of livestock sales, multiplied by a factor to obtain total annual monetary gain or loss to the individual, community, region and Nation.

Response: The text has been revised in an effort to make it easier to understand.

Comment No. 6: The assumption that range improvements are a detriment to animals other than domestic livestock is definitely incorrect, and has been proven so.

Response: Impact assessment indicated both beneficial and adverse impacts from range improvements. See pages 3-30, 3-34 and 3-35 of the DEIS.

Hearing No. V-2

Comment Since data on riparian vegetation trend are unavailable, (Table 3-1)
No. 1: how can a prediction that the riparian zone will either improve or be threatened be made?

Response: See response to written comment 5-1.

Comment Can BLM prove that livestock even consume significant quantities of
No. 2: the key riparian plant species?

Response: The use, often heavy, of riparian vegetation by cattle is well documented in range management literature and supported by diet analysis studies and numerous field observations.

Comment With the absence of data, all speculative and presumptive statements,
No. 3: such as the fish habitat condition is presently poor because "Cattle grazing removes vegetative cover" must be removed from this document.

Response: Comparisons of livestock exclosures with adjacent grazed areas have demonstrated a severe impact to riparian vegetation from livestock grazing (e.g., Chukar Park). See photographs on pages 3-28 and Appendix B4-4. See response to comment 24-18.

Hearing No. V-3

Comment There is no reference made to Class I qualifications.
No. 1:

Response: See response to written comment 18-3.

Comment Allotment 102 Cottonwood has been under a voluntary reduction since
No. 2: 1978, so the 5,274 AUMs of "Present Livestock Use" represents a 29 percent cut in the carrying capacity that was there in 1977. There is no reference made to this.

Response: See response to written comment 18-3.

Comment My suggestion to this committee would be to follow through on some of
No. 3: these utilization studies that we've been taking for the last 2 years. Let's not just base this on a one-shot deal that was taken back in 1976 or 1977 when we had come out of what was considered a 10-year drought in this period.

Response: See response to comment 5-4.

Hearing No. V-4

Comment No. 1: On Table 1-2, it shows a proposed livestock adjustment of an increase of 999 AUMs in Allotment 402. The present active use in Table 1-2 shows 428 AUMs granted in 1978 as Class II privileges. The other 428 AUMs were granted in 1979. Thus, the real net gain is only 571 AUMs.

Response: According to Vale District records, 343 AUMs (Class II) were issued in 1978 in Allotment 402. These AUMs were included in the Present Active Livestock Use (AUMs) in Table 1-2. In 1979, 422 AUMs (Class II) were issued in Allotment 402. The Proposed Livestock Adjustment given in Table 1-2 was compared to 1978 active use; therefore, the 422 AUMs granted in 1979 were part of the 999 AUM adjustment. The AUMs granted as Class II in 1978 and 1979 had been issued as temporary nonrenewable use yearly for many years.

Comment No. 2: The greatest impact on grazing management is the proposed designation of the 3,000 acre West Canal Field near Lytle Boulevard as an off-road vehicle park.

Response: See response to comment 18-6

Comment No. 3: This ORV designation is in direct conflict with this EIS, since our allotment is designated for intensive management, which is impossible as we have already experienced this year.

Response: See response to 18-6

Hearing No. V-5

Comment No. 5: The sixth alternative in the Owyhee EIS was developed by and would be beneficial to, the livestock industry, BLM and multiple users.

Response: The sixth alternative prepared for the Owyhee EIS varies only in methods of implementation from Alternative 3 of the Ironside EIS. Since the minor deviations from Alternative 3 would not result in different impacts than described for Alternative 3 and the methods of implementation could be adopted in the final decision if the present grazing regulations are changed, the Owyhee alternative is not included in the Ironside EIS.

Hearing No. V-6

Comment No. 1: How were areas picked for intensive and nonintensive management?

Response: Intensive management was selected for virtually every allotment in which public lands are a significant portion of the total. Intensive management requires administrative control over the number and season of livestock use. Intensive management is not warranted except where it is needed to enhance other resource values.

Hearing No. V-7

Comment The economic section states "For every dollar generated at the farm level, it produces 51 cents through the economy." That's a 1.51 multiplier, which seems extremely low. Most economists talk in terms of 4 to 7 multiplier through the economy.

Response: The transactions multiplier used in the analysis (which relates ranch sales to total sales of all business) is 2.35 (not 1.51). The total personal income generated among all residents of a county by one dollar of ranch sales is 51 cents.

Comment The EIS states that any increase in AUMs will be allocated to livestock grazing. Can I take this as a legal document? If we do have any increase in AUMs, am I assured that we're going to get it?

Response: The statement on page 1-2 "For the purposes of impact analysis, all increased forage production will be allocated to livestock" was an assumption made for impact analysis as stated. The decision which will follow this EIS will not allocate future forage production. At the time additional forage becomes available, all other affected resources values would be considered prior to making any allocation.

Baker Meeting

Hearing No. B-1

Comment No. 1: The draft EIS is incomplete and deceiving unless it includes both the net and gross income economic impact information.

Response: The text has been revised to show the impacts on gross income. See Errata, page E-23.

Comment No. 2: The draft EIS uses only historical, nominal data which is not valid for determining future economic impact in our agricultural, economic environment. The EIS must depart from traditional economic model to present valid economic impact information. The effect of using those low economic years in your model - the way your model is structured - results in a lower economic impact effect.

Response: Historical data are the most objective basis on which to make judgments about future events. The base period, 1977-1979, used for the estimation of impacts on the cattle industry, is considered reasonably representative of conditions expected during the implementation of the proposal. This judgement was provided by Kerry Gee (Economics, Statistics and Cooperatives Services, U.S.D.A., Fort Collins, Colorado, Personal Communication, March 1980).

Comment No. 3: The only true economic impact the EIS can show would be one that shows the total Baker County cuts of over 12,000 AUMs.

Response: The increases in permitted grazing use are part of the management action and must be taken into account in the impacts. The loss (or gain) of each rancher is considered separately in assessing the impacts on individual ranchers.

Comment No. 4: Table 1-1 and 1-2 uses 1978 livestock use to measure the AUM cuts. Why was the 1978 level picked?

Response: When preparation of the draft EIS began (fall of 1979), the 1978 grazing records were the most recent records available for an entire year. See response to written comment 18-3.

Comment No. 5: To be valid, the cuts should be measured against each unit's Class I privilege. The gross AUM cuts should then be used in economic information.

Response: Active use AUMs, rather than Class I privileges, were used as a baseline for measuring economic impacts for two reasons: (1) Class I privileges consist of both active and suspended AUMs. Active AUMs are the only ones with economic value and available for grazing. (2) Using Class I privileges for comparison to the proposed adjustments would result in showing smaller impacts from either upward or downward adjustments than if active AUMs were used. (See response to comment 18-3.)

Comment No. 6: The draft EIS uses a general economic net income multiplier. We believe that this multiplier is too low in that we are taking a loss for new dollars to Baker County, as most cattle sales are to outsiders.

Response: The fact that most cattle are sold outside the county in which they were produced is reflected in the multiplier. The multiplier was developed for Grant County where similar conditions prevail.

Comment No. 7: The draft EIS does not adequately address the loss of long and short-term borrowing potential as a result of AUM cuts.

Response: The text has been revised in an effort to clarify these impacts. See Errata, page E-21.

Comment No. 8: What are the cost benefits of alternative range improvement programs compared to removing livestock? What is the economic potential of the range?

Response: See response to written comment 12-49.

Comment No. 9: What is the relationship of wildlife use of private or ranch lands to cattle use of public lands?

Response: Except for Alternative 2, it is not anticipated that any of the alternative levels of cattle grazing on public lands would significantly change existing use of wildlife on private lands. Elimination of livestock grazing under Alternative 2 could cause a shift of wildlife use to public lands.

Comment No. 10: There is no direct relationship between the percentage of BLM forage and dependence, because a very significant factor is the timing of the feed.

Response: The bulk of permitted forage has a season of use of April through October. The text has been revised to indicate that impacts presented in terms of annual requirements can be multiplied by a factor of 1.7 (12 months/7 months) to approximate the impacts in seasonal terms for those operations experiencing severe reductions in forage availability. See Errata, page E-17.

Comment No. 11: That "Public lands are responsible for about 0.5 percent of total personal income in Baker County" (page 2-42) is not substantiated.

Response: The estimate of local personal income dependent on public land grazing in Baker County was based upon Appendix M of the DEIS. That analysis treated all sources of grazing as equally productive of local personal income. Should that assumption be in error by as much as ± 50 percent (which is believed to be unlikely) the percentage would range from 0.2 percent to 0.6 percent. The text has been revised to clarify that paragraph one of page 2-42 of the draft referred to public land grazing only and did not include all economic uses of public land in Baker County. See Errata, Chapter 2, Socioeconomics, page E-15.

Comment No. 12: If a document of this significance and this type is to become public record, it is extremely important that the qualifications of the preparers be known.

Response: While individuals have primary responsibility for preparing sections of an EIS, the document is an interdisciplinary team effort. Internal review of the document occurs throughout preparation. Specialists at the District, State Office, and Washington Office level both review and supply information. The List of Preparers has been revised to include disciplines and years of related experience. See Errata.

Comment No. 13: We are not sure how you got the alternatives, except that there are certain alternatives, by law, that have to be included in the document.

Response: The No Action alternative is required by 43 CFR Part 1502.15(d). The Eliminate Livestock Grazing alternative is considered necessary by the Bureau as a response to the court action that requires preparation of the grazing management EISs.

Sentiment at the two scoping meetings opposed discussion of the Optimize Wildlife, Wild Horses and Nonconsumptive Uses alternative. (Lower Level of Livestock Grazing) However, comments from the Oregon Environmental Council indicated that such an alternative should be involved.

A summary of the alternatives to be analyzed in the EIS and a discussion of how they were derived from the scoping process was sent from the Baker District Office on November 20 to everyone who attended the scoping meeting in Baker.

Also see response to hearing comment B-5-5.

Comment No. 14: An additional and quite practical alternative should be added to the study, and that alternative would be to maintain existing livestock grazing levels, perform joint individual site evaluation and work jointly for range improvements including adjusted increased cattle grazing usage.

Response: It would be impossible to analyze the impacts of such a vaguely defined alternative. For analysis purposes, an assumption would have to be made either that there would be no adjustment in livestock use (which would be the same as the No Action Alternative) or that the full amount of the projected forage increase would be allocated to livestock (which would be similar to the Optimize Livestock Grazing Alternative). See response to written comment 12-44.

Comment No. 15: With regard to Federal grazing, the analysis indicates that public grazing privileges do not exert a statistically significant effect on the sale price of mountainous grazing land in the study area during the time period 1970 to 1978. To absolutely refute this statement, we will quote from page 3-33 of the BLM's Owyhee Grazing Environmental Impact Statement draft, written April, 1980 -- the same time as the Ironside Statement., "As early as 1925, it was recognized that the annual value of the Federal grazing privilege was being capitalized into rancher property. It is argued that long use of the range in connection with the early settlement of agricultural lands has resulted in capitalizing the values of public pasturage as part of the values of the ranch," reference USDA, 1925.

Response: See response to written comment 23-6. The text has been revised to include a reference to the Owyhee EIS (Errata, page E-12).

Hearing No. B-2

Comment No. 1: Debt service capacity would deteriorate seriously if a given operation's cash flow is reduced by a reduction in grazing privileges.

Response: Discussion of the impacts on debt service capacity has been modified in the text. See Errata, page E-21.

Comment No. 2: Public grazing privileges do exert a significant effect on sale of mountainous grazing land.

Response: See response to written comment 23-6.

Hearing No. B-3

Comment No. 1: In my opinion, the transactions multiplier, or what you're referred to as a "gross income multiplier," is a valid measure of certain types of economic activity, and that to present a balanced picture of the economic consequences of your proposed actions require that you include and consider as many economic measurement devices available.

Response: Estimates of gross income and impacts on gross income have been incorporated in the revised text. See pages E-14 and E-23 in the Errata.

Comment No. 2: The income generated by that activity is not going to be picked up in your net ranch income figure. The base to which you apply the multiplier is too low -- that the transactions approach would tend to reduce the negative bias that's put into place by using net ranch income per AUM.

Response: The multipliers used in estimating cattle production impacts are applied to gross income (sales), not net income.

Comment A regional multiplier analysis is needed rather than County.
No. 3:

Response: See response to written comment 23-2.

Comment There is an implicit assumption that runs this way: You reduce the
No. 4: number of AUMs by "x" percent. That leads to an "x" percent reduction
in cattle.

Response: See response to comment B-1-10.

Hearing No. B-5

Comment None of the recommendations made at the public hearings held in Baker
No. 1: County appear as alternatives in the EIS.

Response: Sentiment at the Baker scoping meeting favored analysis of only three
alternatives in addition to the proposed action. Those three
alternatives were: 1) Optimize Livestock Grazing, 2) Shift to Sheep
Use on Steep Slopes and 3) Limit Downward Adjustments to Ten Percent
of Active Use Annually. The optimize livestock alternative contains
all of the elements which were recommended at the Baker scoping
meeting. It was decided that the shift to sheep use on steep slopes
could be best handled as an element of the Optimize Livestock Grazing
alternative rather than an individual alternative.

The Limit Downward Adjustment alternative was described differently in
the EIS than proposed at the scoping meeting. It was felt that such a
slow phase-in of any reduction, if it is determined to be needed for
resource protection, would not provide reasonable protection of
resource values. The Limited Downward Adjustment Alternative in the
EIS would provide such reasonable protection.

Comment It has been stated that the "No Action" alternative was required by
No. 2: the Court. In developing this alternative, it has been done on the
premise that no range improvements would be made. Is this a fair
interpretation of the Court's directive? Improvements were being made
continuously on range lands in this area up to the time of the Court's
action, and were then suspended while the EIS was being prepared.

Response: The reason for excluding improvements from consideration in this
alternative is not directly related to the agreement approved by the
Court. The No Action alternative is included in the EIS because it is
required by Council on Environmental Policy Regulations, 40 CFR Part
1502.14(d), not by the Court. BLM interprets this requirement as
limiting the alternative to present levels of use. Thus, it was not
considered appropriate to include an assumption about additional range
improvements.

Comment No. 3: Analysis indicates that considerably more than 39 permittees would have reductions exceeding 10 percent of the allotment. If the 10 percent is related to some other base, the statement is, at best, misleading in the framework of discussion of allotments and percentage reductions.

Response: The statement in the text refers to permittees' losses in terms of their annual forage requirements (number of animals in herd times 12 (months) equals annual requirements in AUMs), not in terms of the AUMs in the BLM allotment.

Comment No. 4: Why are active qualified AUMs not used in determining the reductions, rather than the 1978 use?

Response: See response to written comment 18-3 and Hearing response B-1-7.

Comment No. 5: Why should the total reductions in some allotments be reduced by increases in some other allotments? The reductions are a part of the new proposed BLM plan, and the increases are not. They are primarily the result of improvements made 10 to 15 years ago.

Response: Both the grazing use increases and decreases included with the proposed action and outlined in the Ironside EIS are a result of past grazing management actions. However, no economic impact occurs until an adjustment in livestock use is made. The purpose of the EIS is to assess all changes (impacts) that are likely to occur as the result of the adjustments as well as other phases of the grazing management program to be implemented as part of the proposed action.

Comment No. 6: Another point that has been totally ignored in the draft statement is the manager's manipulative options to use domestic livestock grazing to improve range vegetation toward management objectives. The draft needs revision to remove the livestock grazing bias and recognize the managerial benefits of domestic livestock grazing.

Response: The text recognizes the benefits to vegetation of controlled livestock grazing. See discussion of the various grazing systems on pages 3-5 through 3-10. Specific resource objectives will be developed for each allotment and listed in the Allotment Management Plan. See response to written comment 12-9.

Comment No. 7: If big game is to be increased, what provision has been made to protect the property of the private land owners from further intrusion by additional game numbers?

Response: Big game numbers are not expected to increase significantly as a result of the proposed action or alternatives (see pages 3-30, 31 of the DEIS).

Comment No. 8: Because the proposed adjustment would be temporary and, for most permittees, fully restored in the long-run, no extraordinary difficulty in servicing existing debt, (page 3-51) is not only misleading, it is false.

Response: The referenced statement was in error and has been deleted from the revised text.

Comment No. 9: One of the major failings of the draft is the lack of justification for, or even comment as to the reasons, for the massive cuts proposed.

Response: Grazing use adjustments are made to balance forage use with forage production while maintaining or improving other resource conditions to a satisfactory level. Suitability adjustment is only one of many steps in arriving at a proper grazing use level when a range inventory has been completed. When valid range studies indicate that suitability adjustments or any other factors may lead to incorrect stocking rates, the manager has the flexibility to base initial stocking rates on these studies.

Comment No. 10: Slopes in excess of the so-called 50 percent -- actually a 22 1/2 degree -- are suitable for grazing in Baker County. They have been grazed for many years. Use of the slopes have not, as a general rule, created undue amounts of erosion or overuse of riparian areas and the ranges are in an improving trend.

Response: See response to written comment 12-3.

Comment No. 11: There are insufficient scientific studies presented in the draft document to support management assumptions and proposals for riparian areas. Until adequate studies are completed, the only logical alternative to riparian zone management at this time is status quo.

Response: District observations reveal that many riparian areas in the Ironside EIS area are in unsatisfactory condition and much below their productive potential. Although insufficient data are available to determine their ecological condition, present experience concerning the impact of various livestock grazing systems is sufficient to include actions which would improve riparian areas. See response to hearing comment V-2-3.

Comment No. 12: On the assumption that Baker County would have approximately 10,450 reductions, net, is the economic loss concluded to be \$75,000? If so, this is not a valid conclusion. The process of using assumptions and averages does not produce results which have very much relationship to the facts.

Response: The text has been revised to delete reference to Appendix M. The short-term impact of the proposed action in Baker County from the loss of 10,589 AUMs would be an annual loss of \$456,000 in total gross income (sales) and a loss of \$98,000 in personal income.

Hearing No. B-6

Comment No. 1: There is a strong relationship between fire, grazing and sagebrush which needs much more recognition than given in this statement.

Response: The relationship between grazing and fire and their effect on species composition was recognized in several sections starting on page 3-3 in Chapter 3 of the Ironside DEIS.

Comment No. 2: There are different animals that can be grazed at different periods of time to suppress different species of plants. The statement should be written so that these options are open to the manager.

Response: See response to written comment 12-44. Alternative 4 provides for encouraging sheep use on steep-sloped pastures. Also, allocations to wildlife vary from the AUMs necessary to support the highest historic big game populations in Alternative 5 to no allocation to wildlife in Alternatives 1 and 4.

Comment No. 3: Why were three different methods used to gather baseline data for this study?

Response: The EIS and planning documents relied on the most current and accurate data available at the time they were prepared. As mentioned previously, whenever better information becomes available it will be used to evaluate resource conditions and make appropriate management changes.

Comment No. 4: If condition and trend studies exist, it's better information than survey data to use to reallocate livestock use or cause the manager to make an adjustment.

Response: See response to written comment 5-4

Hearing No. B-7

Comment No. 1: There is no reference to any increase or any damage or anything, referring to wildlife like it does to livestock.

Response: The purpose of the EIS is to address impacts from livestock grazing, not wildlife. See response to comments B-1-13, B-5-8, B-8-2 and B-12-1.

Hearing No. B-8

Comment No. 1: What are the effects of these water spouts on the riparian zones?

Response: The purpose of the EIS (see Purpose and Need in the DEIS) is to analyze only the impacts caused by the livestock grazing program. On page 2-12 in the DEIS, natural causes are acknowledged as a cause of streambank erosion.

Comment No. 2: How can you want to cut this 38 percent on the river, and yet you still want to import elk down there, into that zone?

Response: Small numbers of elk that have caused problems on private lands elsewhere have been trapped and released by ODFW in Allotment 3006. These additional elk have not affected proposed livestock reductions because the few animals involved have not significantly increased existing elk populations in this allotment. The elk transplants were discontinued in 1979.

Hearing No. B-9

Comment No. 1: In Table 2-5, you state that there are elk on the Table Rock Allotment, Number 1016. Our family has used this allotment since the early 1900's, and to the best of my knowledge, there has never been any elk there.

Response: Table 2-5 was in error. See Errata.

Comment No. 2: Table 2-7 states that there aren't any fish in Dixie Creek in Allotment 1039. The stream has a history of having fish and then having a flash flood taking them out. The fish then come back, and the next flash flood takes them out again.

Response: While flash flooding periodically has an impact on the fish in this stream, proposed livestock exclusion along 1 mile of public land would result in a more rapid recovery after these flash floods.

Comment No. 3: The more cattle we take off, the more wild fires we're going to have.

Response: No significant changes in wildfire occurrence are expected to be caused by the proposed action. Although more vegetation would remain after grazing in some areas, more of the total vegetation would be perennial species and, overall, less would be sagebrush and annual plants. Perennials remain green longer than annuals and are not as susceptible to fire as sagebrush overstory/annual understory areas. In addition, an analysis of fire occurrence records covering a period before and after livestock reductions indicated that climate conditions and other factors such as access, type of fire fighting equipment and human activities were the primary factors in the number and size of wildfires.

Comment No. 4: On the Table Rock Allotment, Number 1016, you indicate the trend as downward. This allotment is proposed for a 50 percent reduction. I can remember what it looked like 30 years ago, and there is no way to compare the difference now. Thirty years ago, when the cattle went off in the fall, it was as bare as this floor, 95 percent of it. Today, we don't use one-third of it in our rotation system. We leave grass in both of the other pastures, primarily the early use pasture. And, this doesn't make sense to me.

Response: Trend was determined by use of existing photo-trend plots in accordance with BLM manual procedures and observed apparent trend write ups. See Appendix B1, pages B1-2 and B1-3 in the DEIS. Since there were no data taken on condition and trend 30 years ago, it would be difficult to compare conditions between the two points in time except by observation. The data in Appendix D display the present existing condition and trend.

Hearing No. 11

Comment No. 1: I believe that we are going to have to have some real thorough trend studies before these cuts should be implemented, especially these big cuts without a lot of data to back them up.

Response: See response to written comment 5-4.

Hearing No. 14

Comment No. 1: The general soils map is nothing but a general geology map. There's no way you can relate the Appendix "Properties, Qualities and Acreages of Soils in the Ironside EIS Area," to this so-called general soils map. The other thing was on wildlife. Where is the critical range, and how many animal unit months is the BLM proposing to put on these areas?

Response: The response to comment 12-35 lists the allotments where crucial range occurs. Allocation of livestock AUMs is listed in Table 1-2. The soils and wildlife maps are available for viewing in the district offices. Also see response to written comment 14-3.

Hearing No. 15

Comment No. 1: As BLM gets into fencing of streams like Deer Creek which has few fish, I hope they will keep in mind some kind of cost benefit relationship on these improvements, because as taxpayers, I think it's extremely important, so that we don't wind up in a situation where each fish may cost us a few hundred dollars.

Response: Fencing, which is intended to mitigate the adverse impacts of grazing, is proposed for 2 miles of Deer Creek. Trout spawn in the lower one-half mile. Numerous other species as well as fish would benefit from improved habitat. Streambank erosion and sedimentation would also decrease.

Hearing No. 16

Comment No. 1: You have grossly underestimated the economic impact. Last year, I had gross sales of \$50,000 of cattle, my best year. I had an operating cost of \$37,000, including \$17,000 in purchase of hay, because the grasshoppers ate up all my hay. If you cut me 34 percent, I would have made nothing and would have had a net loss of about \$1,500 last year. That's the economic impact on myself.

Response: The impacts are estimated in terms of normal conditions. The circumstances described in this comment are presumed to be abnormal.

Comment No. 2: I think that the classification is basically faulty in Allotment 1006, where there is a substantial acreage that would be in the late ecosite condition.

Response: The classification may be in error in certain places in the various allotments. In Allotment 1006, the proposed AUM reduction is based on suitability (steep slopes), not on the ecosite classification. All existing information and new data will be used in making the final decision.

Comment No. 3: The 50 percent slope cut, taking in no consideration of the exposure, of the soil, the surrounding areas, is just a lazy man's way of doing it.

Response: Refer to response for hearing comment B-5-10 and B-5-11.

ERRATA

Page

- 1-2 Third paragraph, third sentence. Change to read: These reductions were made by BLM range permittee agreement and will remain in effect until the Allotment Management Plans (AMPs) are implemented.
- 1-4 Table 1-2, Allotment 1001 "Existing Period of Use" column. Change to 4/23-9/22.
- 1-5 Table 1-2, Allotment 1302 "Other Lands (acres)" column. Change to 2,700.
- 1-10 Table 1-3. Allotment 218 includes Allotment 227.
- 1-14 Add to Table 1-5:

| | | | | |
|--------------------------|------|------|------|-------|
| Sedge | 4/15 | 6/20 | 8/1 | 10/15 |
| (<u>Carex spp</u>) | | | | |
| Kentucky bluegrass | 4/10 | 6/10 | 7/10 | 10/15 |
| (<u>Poa pratensis</u>) | | | | |

- 1-15, 1-16, 1-17 and 1-18 (Table 1-6). Delete 1/ from the spring grazing system.
- 1-22 Add to third paragraph:
Whenever evidence of historic or prehistoric occupation is identified during BLM activities, special surveys are undertaken to determine possible conflicts in management objectives. In addition, a Class III (complete) cultural resources inventory is required on all areas to be subjected to ground manipulation activities or the alienation of title. This is accomplished in the pre-planning stage of a project and the results analyzed in the environmental assessment addressing the action (BLM Manual 8100, Cultural Resources Management).

If cultural remains are discovered, the project could be relocated or redesigned. If the project cannot be moved, a data recovery or salvage program will be completed before construction.

Every effort will be made to avoid adverse impacts to cultural resources. However, where that is not possible the BLM will consult with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation in accordance with the Programmatic Memorandum of Agreement by and between the Bureau, the Council and the National Conference of State Historic Preservation Officers, dated January 14, 1980, which sets forth a procedure for developing appropriate mitigative measures.

- 1-25 Change first sentence of the last standard procedure on the page to: Most brush control would be by chemical means with approximately 25 percent by burning.
- 1-28 Seventh line under "Implementation of the Proposed Action". Change to: It is expected that decisions to implement the proposed adjustments would be issued prior to the 1982 grazing season.
- 1-32 See corrected Table 1-10
- 2-1 Second paragraph under Vegetation. Change second sentence to: In addition, there are 14 smaller ecosites comprising approximately 31,000 acres.
- 2-2 See corrected Table 2-1.
- 2-6 First sentence under Ecosite Condition and Trend. Change to: Ecosite condition is an expression of the current plant composition of an ecosite in relation to its potential composition.
- 2-20 Table 2-5, Allotment 1016. Delete "X" under elk. Add "X" under antelope.
- 2-34 Socioeconomic Conditions has been rewritten. See Errata, pages E-7 to E-16.
- 3-2 Last sentence in first paragraph of Impacts on Vegetation. Change to: Where a decrease in key species occurs on grassland ecosites, an increase in woody species such as big sagebrush, particularly Artemisia tridentata ssp. tridentata and Artemisia tridentata ssp. vaseyana, would be expected. On ecosites where Artemisia tridentata ssp. wyomingensis is the predominate variety, little increase in big sagebrush would occur.
- 3-3 Last paragraph before Impacts to Vegetation Composition. Change second sentence to: The shrubland ecosite would not change greatly because of the limited impact on livestock grazing on this ecosite.
- 3-5 Second paragraph, second sentence. Change to: Table 1-6 shows the acres to be included under grazing systems for the alternatives (Proposed column for the proposed action and Alternatives 3, 4 and 5; Existing column for Alternative 1).
- 3-12 Last sentence on page. Change to: Plowing would reduce herbaceous broadleaved species to a lesser degree... .
- 3-17 Fourth paragraph, second sentence. Change to: Also, standing vegetation reduces wind velocity near the ground surface and helps retain soil moisture and keeps the soil temperature lower.
- Fifth paragraph, First sentence. Change to: In the Clover Creek Allotment, no increase in total ground cover is expected... .

Table 1-10 Summary Comparison of Impacts of the Proposed Action and the Alternatives

| Significant Resource | Existing Situation | Proposed Action | Alt. 1 No Action | Alt. 2 Eliminate Livestock | Alt. 3 Limited Adjustment | Alt. 4 Optimize Livestock | Alt. 5 Optimize Other |
|---|--------------------|-----------------|---------------------|-------------------------------|------------------------------|------------------------------|--------------------------|
| <u>Soils</u> | | | | | | | |
| Erosion | --- | +L | -L | +H | +L | +L | +M |
| Streambank erosion (miles improving) | --- | 53 | 22 | 336 | 53 | 26 | 336 |
| <u>Water</u> | | | | | | | |
| Runoff (ac-ft/yr) | 192,700 | 186,810 | 192,700 | 173,430 | 186,810 | 186,810 | 183,065 |
| Coliforms | --- | +L | NC | +H | +L | +L | +H |
| Sediment yield (ac-ft/yr) | 1,041 | 949 | 1,094 | 553 | 949 | 949 | 791 |
| <u>Vegetation</u> | | | | | | | |
| Ecosite condition | | | | | | | |
| Climax | 17,493 | 76,323 | 32,026 | 167,266 | 76,323 | 75,994 | 64,147 |
| Late | 179,246 | 278,371 | 137,467 | 266,556 | 278,371 | 360,749 | 206,443 |
| Middle | 282,845 | 299,987 | 254,036 | 326,486 | 299,987 | 299,891 | 296,440 |
| Early | 301,474 | 126,377 | 357,529 | 20,750 | 126,377 | 44,424 | 214,028 |
| Residual ground cover | --- | +L | -L | +H | +L | +L | +H |
| Forage production (ADMs) | 127,362 | 163,548 | 123,850 | 203,780 | 163,548 | 173,739 | 145,600 |
| Riparian | --- | +L | -L | +H | +L | -L | +H |
| T&E Plants | --- | NC | NC | +H | NC | -L | +L |
| <u>Wildlife Habitat Condition</u> | | | | | | | |
| Deer (crucial acres) | | | | | | | |
| Improving | --- | 55,000 | --- | 5,000 | 55,000 | 55,000 | 171,000 |
| Deteriorating | --- | 5,000 | 26,000 | 168,000 | 5,000 | 30,000 | 3,000 |
| Antelope (acres) | | | | | | | |
| Improving | --- | 36,000 | --- | --- | 36,000 | 42,000 | --- |
| Deteriorating | --- | --- | --- | 31,000 | --- | --- | --- |
| Elk (acres) | | | | | | | |
| Improving | --- | 18,000 | --- | --- | 18,000 | 6,000 | 11,000 |
| Deteriorating | --- | 1,000 | 19,000 | 1,424 | --- | 12,000 | 2,000 |
| Riparian Zones (acres) | | | | | | | |
| Excellent | 48 | 109 | 72 | 381 | 109 | 50 | 381 |
| Good | 290 | 564 | 344 | 1,151 | 564 | 361 | 1,151 |
| Fair | 313 | 232 | 308 | 1 | 232 | 329 | 1 |
| Poor | 721 | 544 | 711 | 195 | 544 | 674 | 195 |
| Birds, small mammals, reptiles | --- | +L | -L | +H | +L | -L | +H |
| Amphibians | --- | +L | -M | +H | +L | -M | +H |
| Fish (stream miles) | | | | | | | |
| Excellent | .5 | 2.9 | .5 | 8.3 | 2.9 | 1.4 | 8.3 |
| Good | 8.3 | 8.1 | 1.3 | 11.2 | 8.1 | 7.4 | 11.2 |
| Fair | 33.2 | 34.8 | 41.1 | 41.2 | 34.8 | 33.2 | 41.2 |
| Poor | 29.0 | 25.2 | 32.1 | 10.4 | 25.2 | 29.0 | 10.4 |
| <u>Recreation</u> | | | | | | | |
| Total visitor use--1990 (visits/yr) | 530,640 | 738,700 | 663,300 | 784,130 | 738,700 | 601,780 | 755,340 |
| <u>Cultural Resources</u> | | | | | | | |
| | --- | -L | NC | NC | -L | -M | -L |
| <u>Visual Resources (contrast)</u> | | | | | | | |
| | --- | -L | -L | +L | -L | -M | +L |
| <u>Wild Horses (numbers)</u> | | | | | | | |
| | 63 | 50 | 50 | 50 | 50 | 0 | 196 |
| <u>Ecologically significant areas</u> | | | | | | | |
| | --- | -L | NC | NC | -L | -M | NC |
| <u>Energy Use</u> | | | | | | | |
| Billion Btu's consumed | --- | 173,292 | 13,000 | 3,819 | 172,751 | 291,712 | 88,235 |
| <u>Socioeconomics 1/</u> | | | | | | | |
| Permittees losing more than 20% of forage needs | --- | 11/Unk. | Unk./Unk. | 76/76 | 1/Unk. | 3/1 | 28/Unk. |
| Local personal income: (\$1,000) | | | | | | | |
| Total | 36,100 | -78/+20 | 0/Unk. | -1,435/-1,396 | +112/+20 | +244/+74 | -513/-668 |
| Grazing | 23,500 | -358/+17 | 0/Unk. | -1,435/-1,435 | -168/+17 | -216/+199 | -685/-685 |
| Construction 2/ | 7,600 | +280/0 | 0/0 | 0/0 | +280/0 | +460/0 | +172/0 |
| Hunting & Fishing | 5,000 | 0/+3 | 0/0 | 0/+39 | 0/+3 | 0/-125 | 0/+17 |

Note: Increase is shown by +, decrease by -. NC = no change from existing situation. Where insufficient data prevent quantification, anticipated changes are expressed using Low (L), Medium (M) and High (H).

1/ Socioeconomic impacts are shown separated by a slash for the short term and long term respectively. Personal income (at annual rates) is in thousands of 1977-79 dollars, and all are shown as changes from the existing situation which represents the total personal income attributable to that activity in Baker and Malheur Counties.

2/ Total economic impact for construction assumed to occur over a 5-year period.

Table 2-1 Ironside Ecosite Groups ^{1/}

| | G-1 | G-2 | G-3 | S-1 | W-1 | W-2 | M-1 | N-1 |
|--|------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|--------------------------------|------------------------------------|-----------|---------|
| Public Land Acres | 204,389 | 168,623 | 316,412 | 78,454 | 4,198 | 16,025 | 30,944 | 132,471 |
| Percent of area ^{2/} | 20% | 17% | 32% | 8% | 1% | 2% | 3% | 13% |
| Dominant Species ^{3/} & % Composition ^{4/} | | | | | | | | |
| Climax | Agsp/Feid 62% Posa 9 Artr 6 | Agsp/Feid 55% Artr 11 Posa 8 | Agsp/Feid 72% Artr 8 Posa 3 | Artr/Arar 24% Posa 23 Agsp 15 | Feid 51% Cage 11 Agsp 9 | Agsp/Feid 59% Artr 11 Posa 8 | <u>5/</u> | † |
| Late | Agsp/Feid 44 Posa 14 Artr 13 | Agsp/Feid 32 Artr 21 Posa 15 | Agsp/Feid 59 Artr 14 Posa 6 | Posa 28 Artr/Arar 25 Sihy 11 | Feid 40 Caru 13 Agsp 7 | Agsp/Feid 33 Artr 25 Posa 6 | <u>5/</u> | † |
| Middle | Agsp/Feid 21 Artr 21 Posa 19 | Artr 34 Posa 21 Sihy/Brte 13 | Agsp/Feid 33 Artr 23 Posa 9 | Posa 33 Artr/Arar 22 Artr 10 | Feid 19 Caru 19 PiPo 11 | Artr 33 Agsp 13 BROMU 9 | <u>5/</u> | † |
| Early | Artr 31 Brte 13 Posa 10 | Artr 39 Brte 19 Posa 12 | Artr 33 Brte 17 Posa 6 | N/A N/A N/A | Caru 24 BROMU 17 Sihy 11 | Artr 38 Sihy 23 Brte 12 | <u>5/</u> | † |
| Ecosite Condition | | | | | | | | |
| Climax (Ac) | 3,032 | 556 | 9,045 | 2,039 | 176 | 362 | 2,283 | † |
| Late (Ac) | 24,413 | 8,666 | 110,997 | 15,331 | 3,667 | 10,475 | 5,697 | |
| Middle (Ac) | 60,958 | 44,635 | 125,133 | 41,176 | 355 | 4,231 | 6,357 | |
| Early (Ac) | 108,906 | 107,419 | 48,440 | 19,793 | -0- | 957 | 15,959 | |
| No Status (Ac) ^{6/} | 7,080 | 7,347 | 22,797 | 115 | -0- | -0- | 648 | |
| Annual Vegetation Production (lbs/ac) | | | | | | | | |
| Climax | 450 | 635 | 815 | 265 | 890 | 530 | <u>5/</u> | † |
| Late | 465 | 610 | 765 | 295 | 965 | 645 | | |
| Middle | 480 | 570 | 695 | 125 | 950 | 850 | | |
| Early | 500* | 570 | 595 | 60* | 930* | 1,015* | | |
| Annual Livestock Forage Production (lbs/ac) | | | | | | | | |
| Climax | 165 | 225 | 290 | 70 | 125 | 170 | <u>5/</u> | † |
| Late | 125 | 150 | 230 | 50 | 105 | 170 | | |
| Middle | 95 | 85 | 150 | 30 | 70 | 180 | | |
| Early | 70* | 55 | 95 | 10* | 45* | 190* | | |
| Total Vegetation Production (lbs) | 99,827,000 | 96,665,000 | 218,943,000 | 9,878,000 | 4,033,000 | 11,518,000 | | |
| Vegetation Ground Cover (%) | | | | | | | | |
| Climax | 43% | N/A | 60% | 58% | N/A | N/A | <u>5/</u> | † |
| Late | 46% | 47% | 53% | 53% | N/A | 57% | | |
| Middle | 45% | 54% | 56% | 46% | N/A | 53% | | |
| Early | 46% | 49% | 58% | N/A | N/A | N/A | | |

R/A Not available * Estimated value due to insufficient data. † Not applicable—nonproductive areas with insignificant vegetative production

^{1/} See Appendix E for listing of ecosites within each group (G-1, G-2, G-3, S-1, W-1, W-2, M-1, & N-1), and Figure 2-1 for location.

^{2/} Does not include 78,452 acres (5 percent of total public land acres) which were not surveyed.

^{3/} Includes only the 3 most common species. See Appendix F for explanation of plant symbols.

^{4/} Composition includes only vegetation production within 4.5 feet of the ground.

^{5/} Because of the diversity and number of sites, no meaningful average could be computed.

^{6/} Ecosite condition not determined.

- 3-18 Second paragraph under Impacts to Riparian Vegetation, first line should be: The spring and modified rest rotation grazing systems and exclusion would also be...
- 3-20 First paragraph. Add the following after line 5: Increased erosion would occur along the fence lines due to trailing by livestock.
- 3-36 First sentence under Vegetation Allocation. Change 5.5 miles to 6.1 miles.
- 3-42 See revised Table 3-12.
- 3-46 Table 3-13, VRM I, delete Allotment 217.
- 3-48 Table 3-14, Energy Consumption (1,000,000 Btu's) associated with changes in hunting and fishing use, Alternative 3, change 1,765 to 2,306.
- 3-49 Impacts on Economic Conditions has been rewritten. See Errata, pages E-17 to E-29.
- A2-3 Delete first sentence of proposed decision under watershed protection. Replace with: Deduct useable livestock forage AUMs from 35,700 acres unsuitable for grazing due to steepness of slope and/or distance from water.
- B1-1 Fourth paragraph under Determination of Ecosite Condition and Trend, first line: Replace "of the plants" with "of a plant species".
- B1-1 On the table, change Idaho fescue from 17 to 7 in column 3.
- B1-4 Last word, second line in the paragraph following the equation (ending with $x = 100$ AUMs at 50% utilization) should begin a new paragraph: Forage production based on annual rainfall... .
- B1-7 Footnote 2: Change 57% to 75%.
- D-1 Change Allotment Number 501 to 201.

Table 3-12 Estimated Visitation for Hunting and Fishing--1990 1/
Visits/Year

| Recreational Activity | Proposed Action BLM | <u>2/</u> Alternative 1 | | Alternative 2 BLM | Alternative 3 BLM | Alternative 4 BLM | Alternative 5 BLM |
|--------------------------|------------------------|----------------------------|----------------|----------------------|----------------------|----------------------|----------------------|
| | | Total | BLM | | | | |
| Fishing | 60,910 | 405,700 | 51,840 | 64,800 | 60,910 | 46,660 | 62,200 |
| Hunting | | | | | | | |
| Big Game | 67,100 | 181,760 | 70,610 | 67,100 | 67,100 | 63,500 | 67,100 |
| Upland Game | 29,100 | 55,790 | 25,280 | 34,800 | 29,100 | 24,000 | 31,600 |
| Waterfowl | <u>2,500</u> | <u>20,050</u> | <u>2,000</u> | <u>2,800</u> | <u>2,500</u> | <u>2,000</u> | <u>2,600</u> |
| TOTAL | <u>159,610</u> | <u>663,300</u> | <u>149,730</u> | <u>169,500</u> | <u>159,610</u> | <u>136,160</u> | <u>163,500</u> |

1/ Visitor use data are not available to quantify visitor use changes for other activities.

2/ Visitor use projections to 1990 under a continuation of the existing situation are based upon an estimated 25 percent increase in the population of the State from 1974 to 1990 (Portland State University 1976). Projected use to 1990 may, in fact, be lower than indicated. Oregon Department of Transportation (1976) forecasts a 17 percent increase for recreational visitation in Malheur County from 1975 to 1990.

Source: Derived from Bureau planning documents, visitor use projections and professional estimates.

CHAPTER 2 SOCIOECONOMIC CONDITIONS

The EIS area is located in a part of eastern Oregon comprising most of Baker County and the north portion of Malheur County. This rugged and semi-arid region supports a rather sparse population mainly dependent on cattle, forest products and field crops. The region is served by a major east-west highway (I-84) and a main line railroad, but is isolated by its location of more than 300 miles from the major markets of western Washington and Oregon.

The discussion of economic and social conditions is based mainly upon county-wide data for Baker and Malheur Counties. About 80 percent of the population of the two counties resides within the EIS area, so data for the two counties are considered reasonably representative of conditions in the vicinity of the proposed action although, the EIS area (Figure 1-1) consists of only 41 percent of the total land of these two counties.

Population and Social Attitudes

The 1979 population of the two counties was 42,700 (Portland State University 1979). As shown in Table 2-11, the population of Baker County declined between 1960 and 1970 causing a net loss in the combined population of the two counties, but during the last decade, the populations of both counties have shown moderate upward trends.

Table 2-11 Population Trends, Baker and Malheur Counties, 1960-1979

| Year | <u>Baker County</u> | | <u>Malheur County</u> | |
|------|---------------------|----------------------------------|-----------------------|----------------------------------|
| | <u>Population</u> | <u>Annual Rate of Change</u> | <u>Population</u> | <u>Annual Rate of Change</u> |
| 1960 | 17,295 | - | 22,764 | - |
| 1970 | 14,919 | -1.5% | 23,169 | +0.2 |
| 1975 | 15,700 | +1.0% | 24,200 | +0.9 |
| 1979 | 16,600 | +1.4% | 26,100 | +1.9 |

Source: U.S. Bureau of Census 1972; Portland State University 1979

The social and attitudinal characteristics of the population appear to be similar to those discussed by Grigsby (1976) for adjacent Harney County. That study showed that the ranching sub-culture perceives itself as characterized by the traditional strengths and values associated with the "pioneer spirit": independence, rugged individualism, adaptability, practicality, and enjoyment of the variety of types of labor and direct contact with nature which ranching provides. Ranchers believe their experiences, values and attitudes are often at odds with "big government," which, as they generally perceive it, neither understands nor shares their values and interests. Bureau planning documents for the EIS area indicate similar ideas and attitudes among the local population. There is also a general feeling that rangeland resources should be utilized without abuse, but primarily to serve the needs of the local livestock industry.

Income

Personal income in 1978 amounted to \$104,568,000 in Baker County and \$162,328,000 in Malheur County. Income per capita was \$6,588 and \$6,396 respectively, as compared with a statewide average of \$8,076 (U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System (REIS) April 1980).

Low or negative net income for farm/ranch proprietors has contributed to low per capita income levels in recent years. Table 2-12 shows farm income trends since 1972.

Personal income, including labor and proprietors income, is a measure of economic welfare, but it does not directly measure business activity, or gross income. While no estimate of annual gross income in these counties is available, it is judged to be in the range of 3 1/2 to 5 times the size of personal income based on a study for Grant County (Bromley 1964) which showed a ratio of 3.74.

Table 2-12 Farm Labor and Proprietors Income, 1972-78
(Thousands of Dollars)

| <u>Year</u> | <u>Baker County</u> | | | <u>Malheur County</u> | | |
|-------------|---------------------|--------------------|--------------|-----------------------|--------------------|--------------|
| | <u>Labor</u> | <u>Proprietors</u> | <u>Total</u> | <u>Labor</u> | <u>Proprietors</u> | <u>Total</u> |
| 1972 | 1,352 | 6,637 | 7,989 | 6,355 | 12,589 | 18,944 |
| 1973 | 1,756 | 9,076 | 10,832 | 8,552 | 26,465 | 35,017 |
| 1974 | 1,749 | 4,785 | 6,534 | 8,837 | 27,737 | 36,574 |
| 1975 | 2,212 | 1,314 | 3,526 | 11,275 | 13,505 | 24,780 |
| 1976 | 2,286 | -41 | 2,245 | 11,587 | 10,455 | 22,042 |
| 1977 | 3,158 | -2,065 | 1,093 | 16,116 | -3,820 | 12,296 |
| 1978 | 3,292 | 1,959 | 5,251 | 16,778 | 7,807 | 24,585 |

Source: U.S. Department of Commerce, Bureau of Economic Analysis, REIS, April 1980.

Economic Activity

In recent years (1976-1978), the civilian labor force of Baker and Malheur Counties has averaged 17,440 workers or 42 percent of the population. Unemployment rates averaged about 7.2 percent in Baker County and 6.3 percent in Malheur County.

Self-employed proprietors make up an above-average proportion of the work force in these two counties as indicated in Table 2-13. This is mainly due

Table 2-13 Average Civilian Labor Force and Employment, 1976-78
(Average number of workers during the 3-year period)

| Item | Baker County | | Malheur County | | State Total | |
|----------------------|--------------|------------------|----------------|------------------|-------------|------------------|
| | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total |
| Civilian labor force | 6,500 | 100.0 | 10,940 | 100.0 | 1,129,000 | 100.0 |
| Unemployment | 470 | 7.2 | 690 | 6.3 | 85,670 | 7.6 |
| Employment | 6,030 | 92.8 | 10,250 | 93.7 | 1,043,330 | 92.4 |
| Proprietors 1/ | 1,580 | 24.5 | 1,580 | 14.4 | 107,700 | 9.5 |
| Wage and Salary | 4,440 | 68.3 | 8,670 | 79.3 | 935,630 | 82.9 |
| Manufacturing | 680 | 10.5 | 1,720 | 15.7 | 205,230 | 18.2 |
| Nonmanufacturing | 3,760 | 57.8 | 6,950 | 63.5 | 730,400 | 67.5 |

1/ Derived as difference between total employment and wage and salary employment.

Source: Oregon Department of Human Resources, Employment Division, 1977-1979

to the importance of agriculture and the number of farm/ranch proprietors in the area.

As shown in the table, manufacturing employment in both counties is a smaller proportion of total employment than that for the State. Lumber and wood products makes up most of the manufacturing employment in Baker County, while food processing is the principal manufacturing activity in Malheur County. Construction employment over the 3-year period averaged about 160 in Baker County and 350 in Malheur County, or about 3 percent of the combined labor force in the two counties.

According to the 1974 Census of Agriculture (U.S. Bureau of the Census 1977), there were 551 farms and ranches in Baker County and 1,317 in Malheur County in that year. A high proportion of these farms and ranches were engaged in cattle production--Baker, 469; Malheur, 902. Farms and ranches were large on the average--Baker, 1,452 acres; and Malheur, 1,122 acres.

The two counties are important cattle-producing areas, accounting for about 20 percent of cattle herds in the State in 1978. There was a total of 94,000 cattle in Baker County and 200,000 cattle in Malheur County in 1978.

Table 2-14 shows the value of agricultural sales from 1973 through 1978. These amounts represent the total annual production value, or gross income of agriculture. Most of the value of production in Baker County is in livestock; crop value exceeds livestock value in Malheur County due to substantial production of field crops and fresh vegetables in the northeastern part of the county.

Table 2-14 Value of Agricultural Products Sold, 1973-1978
(Thousands of Dollars)

| Year | Baker County | | Malheur County | |
|------|--------------|-------|----------------|--------|
| | Livestock | Crops | Livestock | Crops |
| 1973 | 15,627 | 2,464 | 29,247 | 61,894 |
| 1974 | 10,455 | 4,065 | 27,043 | 58,122 |
| 1975 | 12,400 | 4,029 | 29,519 | 56,361 |
| 1976 | 11,104 | 3,496 | 30,906 | 54,484 |
| 1977 | 9,740 | 3,662 | 32,920 | 48,046 |
| 1978 | 14,701 | 4,104 | 48,088 | 55,341 |

Source: Oregon State University, Extension Service, Commodity Data Sheets, 1979

The business of livestock production creates additional local sales activity (gross income) through the purchases of ranchers and their business associates. A portion of this gross income is earned by individuals as personal income. Estimates of the relationships of ranchers' sales to total gross sales and to personal income generated have been developed for Grant County (Obermiller and Miller 1980). Applying these ratios to Baker and Malheur County livestock sales figures, the total gross income generated locally by livestock producers in 1978 is estimated at about \$35 million in Baker County and about \$115 million in Malheur County.

Local personal income generated by these transactions was \$7.6 million in Baker County and \$24.7 million in Malheur County or about \$32 million in total.

Economic Significance of Public Rangeland Resources

The following sections describe the economic importance of public rangeland resources in terms of: users' forage needs, ranch property values, and financial viability; and local income and local employment dependent upon public land grazing, wildlife and recreational uses.

Dependence of Users on BLM Grazing Permits

About 270 permittees with 86,179 cattle (or equivalent) held grazing permits for public lands in the EIS area in 1979. The total authorized forage amounted to 13.7 percent of the total annual herd forage requirements for these herds (9.0 percent in the Baker District portion and 19.3 percent in the Vale District portion).

Table 2-15 shows the average dependence on forage from public lands for permittees within each size group classified by herd size. The degree of dependence on licensed forage is slightly higher for the smaller herd size classes than for the larger size classes in the EIS area as a whole.

Table 2-15 Permittee Dependence on Licensed Forage, by Herd Size ^{1/}

| Size of Herd ^{2/} | Permittees | | Herds ^{2/} | | Licensed Forage on Public Lands ^{3/} | | |
|----------------------------|------------|------------------|---------------------|------------------|---|------------------|-------------------------|
| | Number | Percent of Total | Number | Percent of Total | Amount (AUMs) | Percent of Total | Percent of Requirements |
| BAKER DISTRICT | | | | | | | |
| Under 100 | 45 | 26.6 | 1,900 | 4.0 | 2,679 | 5.3 | 11.8 |
| 100---399 | 77 | 45.6 | 15,488 | 33.1 | 22,464 | 44.2 | 12.1 |
| 400---999 | 43 | 25.4 | 24,053 | 51.4 | 23,638 | 46.5 | 8.2 |
| 1,000 & Over | 4 | 2.4 | 5,361 | 11.5 | 2,035 | 4.0 | 3.2 |
| Total | 169 | 100.0 | 46,802 | 100.0 | 50,816 | 100.0 | 9.0 |
| VALE DISTRICT | | | | | | | |
| Under 100 | 19 | 18.8 | 734 | 1.9 | 2,170 | 2.4 | 24.6 |
| 100---399 | 49 | 48.5 | 8,526 | 21.6 | 25,824 | 28.3 | 25.2 |
| 400---999 | 22 | 21.8 | 12,407 | 31.5 | 34,438 | 37.7 | 23.1 |
| 1,000 & Over | 11 | 10.9 | 17,710 | 45.0 | 28,907 | 31.6 | 13.6 |
| Total | 101 | 100.0 | 39,377 | 100.0 | 91,339 | 100.0 | 19.3 |
| EIS AREA | | | | | | | |
| Under 100 | 64 | 23.7 | 2,634 | 3.0 | 4,849 | 3.4 | 15.3 |
| 100---399 | 126 | 46.7 | 24,014 | 27.9 | 48,288 | 34.0 | 16.8 |
| 400---999 | 65 | 24.1 | 36,460 | 42.3 | 58,076 | 40.9 | 13.3 |
| 1,000 & Over | 15 | 5.5 | 23,071 | 26.8 | 30,942 | 21.8 | 11.2 |
| Total | 270 | 100.0 | 86,179 | 100.0 | 142,155 | 100.0 | 13.7 |

^{1/} Data pertains to livestock operators holding forage permits from BLM within the EIS area. Forage on National Forest and State lands is not covered.

^{2/} Livestock herds other than cattle were converted to cattle equivalents in terms of forage requirements.

^{3/} Represents active AUMs currently licensed. Licenses for 214 AUMs on lands in Vale District are administered by and included in data for Baker District.

In 1978, livestock use was reduced by 13,903 AUMs in the Vale District portion (see Table 1-3). Minor increases of 421 AUMs occurred the same year. Table 2-16 shows licensed forage and degree of dependence prior to these changes.

Table 2-16 Dependence on Licensed Forage Prior to 1978 Adjustments 1/

| <u>Herd Size</u> | <u>Amount (AUMs)</u> | <u>Percent of Total</u> | <u>Percent of Requirements</u> |
|------------------|--------------------------|-----------------------------|------------------------------------|
| BAKER DISTRICT | | | |
| Under 100 | 2,679 | 5.3 | 11.8 |
| 100---399 | 22,464 | 44.2 | 12.1 |
| 400---999 | 23,638 | 46.5 | 8.2 |
| 1,000 & Over | <u>2,035</u> | <u>4.0</u> | <u>3.2</u> |
| Total | 50,816 | 100.0 | 9.0 |
| VALE DISTRICT | | | |
| Under 100 | 2,314 | 2.2 | 26.3 |
| 100---399 | 29,130 | 27.8 | 28.5 |
| 400---999 | 40,180 | 38.3 | 27.0 |
| 1,000 & Over | <u>33,197</u> | <u>31.7</u> | <u>15.6</u> |
| Total | 104,821 | 100.0 | 22.2 |
| EIS AREA | | | |
| Under 100 | 4,993 | 3.2 | 15.8 |
| 100---399 | 51,594 | 33.2 | 17.9 |
| 400---999 | 63,818 | 41.0 | 14.6 |
| 1,000 & Over | <u>35,232</u> | <u>22.6</u> | <u>12.7</u> |
| Total | 155,637 | 100.0 | 15.0 |

1/ Represents active AUMs in 1977 prior to reductions of 13,903 AUMs cited in Table 1-3 and increases of 421 AUMs. Distribution by herd size and calculations of percent of annual requirements based on data in Table 2-15.

BLM Grazing Permits and Ranch Property Values

The Bureau of Land Management does not recognize grazing permits as vested property rights; however, de facto effects on private asset valuation may occur. Based on BLM staff reports of interviews with parties to real estate transactions involving 3,000 AUMs in BLM grazing permits during 1977-79, \$65 per AUM was the composite valuation. These four sales were judged to provide the most reliable evidence of the eight reports available as either the purchaser or seller personally reported their detailed appraisal.

Estimates of the values placed on grazing permits associated with ranch properties when sold have varied widely from the estimate of \$65 per AUM given above. A recent study of ranch sales in Grant and Umatilla Counties found no statistically valid evidence that public grazing rights affected

ranch sales values (Winter 1979). However, grazing permits have sold at prices ranging from \$22 to \$55 per AUM in southern Idaho according to the Owyhee Grazing Management DEIS (USDI, BLM 1980). In public testimony, a Baker County rancher stated that he was willing to pay \$150 per AUM for public grazing rights in his neighborhood (Public Hearing on Ironside EIS, Baker, Oregon, June 4, 1980). Also, an opinion that the current value of grazing rights to be \$400 per AUM was received in comment on the DEIS (letter 22).

Financial Viability of Ranch Enterprises

In this discussion, reference is made to three terms which may require explanation, overall carrying capacity, debt service capacity and debt load. Overall carrying capacity is the herd size which can be prudently maintained on the forage sources which a ranch has available. It is a concept used by lenders in appraising a ranch for loan purposes. Debt service capacity is the amount of money regularly available (cash flow) to the rancher which could be used to make interest and principal payments if any debt were incurred. It represents the maximum amount of debt for which the rancher could meet the payments. The debt load is the relative size of debt payments among other costs.

The ability of ranch enterprises to survive the adjustments which might be required by a loss of grazing privileges is related to their ability to make the necessary payments on additional debt. A ranch free of debt is able to borrow more to make necessary adjustments in operations, but also (initially at least), has no fixed debt payments to be made if ranch operations must be scaled down. The greater the proportion of fixed costs such as debt payment in a ranch budget, the more inflexible the operation becomes because a certain level of operation must be sustained in order to cover the fixed costs. Differences in debt loads (per unit of carrying capacity) account for a major part of the differences in overall costs among ranches of the same size.

In the absence of information on existing debt loads, this discussion focuses on the debt service capacity of a ranch in total rather than on any capacity remaining after current debt service needs are met.

As a means of measuring debt service capacity, ranch budget information (presented in Appendix L) on income and expenses is used to develop estimates of "return above cash costs" for several ranch herd size classes. Return above cash cost is the amount of money available after payment of cash costs (See Appendix L) to cover the support of the rancher's household, replacement of capital equipment (depreciation), and repayment of interest and principal on intermediate or long-term loans.

The estimates are presented in Table 2-17. A representative ranch in the Baker District portion of the EIS area with less than 100 cows, for example, is estimated to have about \$5,000 left out of the average year's receipts to cover household expenses, depreciation and non-short-term debt. This amount divided by annual forage requirements (12 x herd size) is the return above cash cost per AUM.

Table 2-17 Average Return Above Cash Costs Attributable to Forage
from Public Land and to All Forage Sources ^{1/}
(1977-79 average prices)

| <u>Herd Size</u> | <u>Amount per AUM</u> | <u>Amount per ranch</u> | |
|------------------------|---------------------------|-------------------------|--------------------|
| | | <u>Public land</u> | <u>All sources</u> |
| BAKER DISTRICT PORTION | | | |
| Under 100 | \$10 | \$ 600 | \$ 5,000 |
| 100---399 | 8 | 2,400 | 19,000 |
| 400---999 | 8 | 4,900 | 60,000 |
| 1,000 or more | 9 | 4,500 | 140,000 |
| All sizes | 9 | 2,600 | 29,000 |
| VALE DISTRICT PORTION | | | |
| Under 100 | \$13 | \$ 1,500 | \$ 6,200 |
| 100---399 | 10 | 5,000 | 20,000 |
| 400---999 | 12 | 10,000 | 83,000 |
| 1,000 or more | 8 | 10,000 | 147,000 |
| All sizes <u>2/</u> | 10 | 9,000 | 44,800 |
| EIS AREA | | | |
| All sizes | \$10 | \$ 5,000 | \$ 35,000 |

^{1/} Based upon estimates of average "Return Above Cash Cost" developed by E.S.C.S. (Gee 1980). (Appendix L)

^{2/} For conditions prior to the 1978 reductions, average return in the Vale District portion of the EIS area would be \$10 per AUM and \$10,000 per ranch from public land forage.

Return above cash cost is a guide to the effect of grazing permit reductions on ranch operations, but its defects need to be kept in mind. First, it does not take into account the differential effects among individual ranchers with different debt loads. Second, it does not reflect the changes in average costs (and returns) which may occur with substantial changes in the level of operations. That is, if operations are reduced, and costs are not reduced proportionately, then average cost per unit increases and return above cash cost per unit will decline.

Local Income and Employment Effects

The gross income, or sales, of ranchers holding BLM grazing permits in the EIS area is estimated to have been about \$19 million annually on the average for the years 1977-1979. These estimates represent price conditions during a period which included the high beef price years, 1978 and 1979. Gross income

for Baker District permittees in the EIS area was about \$10.0 million, and gross income for those in the Vale District about \$9.2 million. Based on the estimated multiplier effect of the industry in Grant County (Obermiller and Miller 1980), the total gross income generated among all businesses in these counties by these ranchers' dealings amounted to about \$24 million annually in Baker County and \$22 million in Malheur County.

Estimates of local personal income derived from the beef raising activities of ranchers who hold grazing permits are presented in Table 2-18. Based on 1978 personal income levels, beef production accounted for \$7.5 million, or 7.2 percent of Baker County income, and \$16.0 million, or 9.9 percent of all ranchers and of Malheur County income. The \$5.15 million generated by permittees in the EIS area in Baker County amounted to 4.9 percent of Baker County income, and the \$4.75 million in Malheur County amounted to 2.9 percent of that county's income. The portion of their forage derived from public lands was responsible for about 0.4 percent of the total personal income in Baker County and 0.6 percent in Malheur County.

Employment in livestock and other local industries attributable to grazing public lands is about 150 workers. This estimate was made by dividing the income estimates in Table 2-18 by 1978 average annual earnings in covered employment in Baker and Malheur counties (\$9,676) (Oregon Employment Division, 1979, 1980).

Hunting and Fishing Income

A portion of the local economic activity is dependent upon the wildlife and fish found in the area. Wildlife habitat on public lands accommodated 39 percent of big game hunting, 45 percent of upland game hunting, 10 percent of waterfowl hunting and 13 percent of fishing activity. Recreation use (hunting and fishing) is the basis for economic analysis of wildlife. (See Recreation, Table 2-8.)

In 1975, about \$1.5 million of \$153.4 million in personal earnings income for Baker and Malheur Counties was attributable to expenditures of hunters and anglers in the EIS area. Expenditures related to hunting and fishing on public lands in the EIS area accounted for approximately \$800,000 (or 26 percent) of the local personal income so generated. Adjustment of this amount to 1978 price levels indicates that the dollar amount of personal income generated would be \$1 million out of a total of \$4 million in local income attributable to hunting and fishing.

Table 2-18 Local Personal Income Generated
by Livestock Production of All Ranchers ^{1/}
and of Ranchers Holding BLM Grazing Permits
(1977-79 average prices)

| <u>Herd Size</u> | <u>Income per AUM</u> | <u>BLM Permittees</u> | | ¢ | |
|------------------------|---------------------------|-----------------------|---------------------|---|---------------------|
| | | <u>Public</u> | <u>All Sources</u> | | |
| | | <u>Land</u> | <u>2/ of Forage</u> | ¢ | <u>All Ranchers</u> |
| BAKER DISTRICT PORTION | | | | | |
| | | | | ¢ | BAKER CO. |
| Under 100 | \$10 | \$ 30,000 | \$ 200,000 | ¢ | 4/ |
| 100---399 | 9 | 210,000 | 1,710,000 | ¢ | 4/ |
| 400---999 | 9 | 220,000 | 2,660,000 | ¢ | 4/ |
| 1,000 or more | 9 | <u>20,000</u> | <u>560,000</u> | ¢ | 4/ |
| All sizes | 9 | \$470,000 | \$ 5,150,000 | ¢ | \$7,500,000 |
| VALE DISTRICT PORTION | | | | | |
| | | | | ¢ | MALHEUR CO. |
| Under 100 | \$12 | \$ 30,000 | \$ 100,000 | ¢ | 4/ |
| 100---399 | 12 | 310,000 | 1,230,000 | ¢ | 4/ |
| 400---999 | 12 | 410,000 | 1,760,000 | ¢ | 4/ |
| 1,000 or more | 8 | <u>230,000</u> | <u>1,650,000</u> | ¢ | 4/ |
| All sizes <u>3/</u> | 11 | \$970,000 | \$ 4,750,000 | ¢ | \$16,000,000 |
| EIS AREA | | | | | |
| | | | | ¢ | BOTH COUNTIES |
| TOTAL <u>3/</u> | \$10 | \$1,440,000 | \$ 9,900,000 | ¢ | \$23,500,000 |

- 1/ Based upon "Total Value of Sales" from Gee (1980) and the estimate of direct and indirect household income per dollar of export sales by the "Dependent Ranching" sector developed by Oregon State University for Grant County (Obermiller and Miller 1980).
- 2/ Income attributed to public land represents proportion of total income generated equal to public forage proportion of total permittee forage.
- 3/ Based on conditions prior to the 1978 reductions, county personal income would amount to \$11 per AUM and \$1,100,000 in total for public lands in the Vale District portion of the EIS area.
- 4/ Data not available.

CHAPTER 3 IMPACTS ON ECONOMIC CONDITIONS

Introduction

Economic effects of the proposed action and alternatives are expressed in terms of effects on: annual forage needs of users (permittees); ranch sales values; ranch income and operating adjustments; and local income and employment from grazing, construction of range improvements and recreational hunting and fishing.

Effect on Users' Forage Needs

The effects of the proposed action and alternatives on the forage needs of individual ranches was calculated in the following way. For the purposes of analysis, the assumption was made that downward adjustment of permitted grazing would be shared by all users in each allotment in proportion to their current active privileges in that allotment. Table 1-11 shows existing livestock use (Alternative 1) and the amount of use proposed for each alternative except Alternative 2, which would permit no livestock use. To find the effect on the individual permittee, the percent change in livestock AUMs for the allotment was calculated and that percentage was applied to the permittee's active AUMs in the allotment.

For example, the initial effect of the proposed action in Allotment 101 is a reduction of 3,011 AUMs (7,481 - 10,492) which, when divided by the existing use (10,492 AUMs), amounts to a 28.7 percent reduction. Assuming the permittee had 1,000 AUMs of active use in Allotment 101, the reduction would be 287 AUMs, or 28.7 percent of the present holding. The effect of other alternatives was calculated in the same way.

Public lands grazing use is analyzed here in terms of the annual forage requirements of ranchers, and does not take account of seasonal requirements. In seasonal terms, impacts on public land forage (based on its most common season of use, April through October) would be about 1.7 times the impacts given in annual terms, and the effects of adjustments would be magnified in the same way.

Table 3-15 shows average and maximum change in dependence on public forage by herd size for alternative actions. Table 3-16 shows the number of permittees who would experience losses in excess of 10 (and 20) percent of their herd forage requirements for each alternative. Summary information on the effects measured from 1977 public forage levels in the Vale District are also shown in these two tables.

The average change in dependence on public forage would range from a gain of 1.9 percent to a loss of 13.7 percent of annual forage requirements for the different alternative actions. Changes would not be uniform among permittees. Assuming that adjustments in each allotment were apportioned among affected permittees on a pro-rata basis, changes in licensed forage as a percentage of annual forage requirements depending on the action taken would range from an increase of 62 percent to a loss of 58 percent for individual ranchers as shown in Table 3-15.

Table 3-15 Average and Maximum Change in Dependence on Public Forage at Initial Implementation of Alternative Actions 1/
(Change in licensed forage expressed as percent of annual forage requirements.)

| Herd Size | Proposed Action 2/ | | | Alt. 2 Elim. Livstck. | | | Alt. 3 Limit Adj. | | | Alt. 4 Optimize Livestock | | | | | | Alt. 5 Optimize Other | | |
|------------------------|--------------------|---------|------|-----------------------|---------|------|-------------------|---------|------|---------------------------|------|------|-----------|------|------|-----------------------|---------|------|
| | Average Change | Maximum | | Average Change | Maximum | | Average Change | Maximum | | Short Term | | | Long Term | | | Average Change | Maximum | |
| | | Gain | Loss | | Gain | Loss | | Gain | Loss | Change | Gain | Loss | Change | Gain | Loss | | Change | Gain |
| BAKER DISTRICT PORTION | | | | | | | | | | | | | | | | | | |
| Under 100 | -1.4 | +13 | -19 | -11.8 | 0 | -42 | -0.5 | +13 | -8 | +0.1 | +5 | -5 | +3.1 | +15 | -1 | -4.3 | +7 | -28 |
| 100---399 | -3.1 | +4 | -28 | -12.1 | 0 | -42 | -1.5 | +4 | -9 | -1.9 | +7 | -18 | +1.5 | +13 | -14 | -5.9 | +2 | -34 |
| 400---999 | -1.7 | +3 | -14 | -8.2 | 0 | -32 | -0.6 | +3 | -4 | 0.0 | +3 | -10 | +1.0 | +14 | -6 | -3.5 | 0 | -18 |
| 1,000 and over | +0.4 | +1 | 0 | -3.2 | 0 | -11 | -0.4 | +1 | 0 | +0.5 | +1 | 0 | +1.8 | +6 | 0 | -0.4 | 0 | -1 |
| All Sizes | -1.9 | +13 | -28 | -9.0 | 0 | -42 | -0.8 | +13 | -9 | -0.6 | +7 | -18 | +1.3 | +15 | -14 | -3.9 | +7 | -34 |
| VALE DISTRICT PORTION | | | | | | | | | | | | | | | | | | |
| Under 100 | -2.9 | +15 | -25 | -24.6 | 0 | -58 | -1.0 | +15 | -25 | -0.9 | +18 | -23 | +7.5 | +23 | -23 | -10.5 | +8 | -31 |
| 100---399 | -6.2 | +9 | -22 | -25.2 | 0 | -58 | -2.6 | +9 | -9 | -3.5 | +10 | -19 | +4.8 | +62 | -19 | -11.3 | 0 | -29 |
| 400---999 | -7.6 | +3 | -26 | -23.1 | 0 | -54 | -3.6 | +3 | -11 | -5.9 | +8 | -24 | +1.9 | +20 | -15 | -12.8 | 0 | -31 |
| 1,000 and over | -3.6 | 0 | -16 | -13.6 | 0 | -50 | -2.0 | 0 | -7 | -2.5 | +2 | -13 | +2.0 | +19 | -4 | -6.4 | 0 | -22 |
| All Sizes | -5.2 | +15 | -26 | -19.3 | 0 | -58 | -2.2 | +15 | -25 | -3.7 | +18 | -23 | +2.7 | +62 | -23 | -9.6 | +8 | -31 |
| 1977 base 3/ | -8.1 | | | -22.2 | | | -5.5 | | | -6.6 | | | -0.2 | | | -12.4 | | |
| EIS AREA | | | | | | | | | | | | | | | | | | |
| Under 100 | -1.8 | +13 | -25 | -15.3 | 0 | -58 | -0.7 | +15 | -25 | -0.2 | +18 | -23 | +4.3 | +23 | -23 | -6.0 | +8 | -31 |
| 100---399 | -3.8 | +9 | -28 | -16.8 | 0 | -58 | -1.9 | +9 | -9 | -1.9 | +10 | -19 | +2.7 | +62 | -19 | -7.8 | +2 | -34 |
| 400---999 | -3.7 | +3 | -26 | -13.3 | 0 | -54 | -1.6 | +3 | -11 | -2.3 | +8 | -24 | +1.3 | +20 | -15 | -6.6 | 0 | -31 |
| 1,000 and over | -2.7 | +1 | -16 | -11.2 | 0 | -50 | -1.5 | +1 | -7 | -1.9 | +2 | -13 | +1.9 | +19 | -4 | -5.0 | 0 | -22 |
| All Sizes | -3.4 | +15 | -28 | -13.7 | 0 | -58 | -1.6 | +15 | -25 | -2.0 | +18 | -23 | +1.9 | +62 | -23 | -6.5 | +8 | -34 |
| 1977 base 3/ | -4.7 | | | -15.1 | | | -2.9 | | | -3.3 | | | -0.6 | | | -7.8 | | |

1/ Information is not available for Alternative 1, No Action.

2/ Data for the proposed action represent short-term impacts. Over the long term, the average change in dependency from the existing situation would be a loss of 0.6 percent in the Baker District, a gain of 0.9 percent in the Vale District portion of the EIS area and an overall gain of 0.1 percent. Average changes by herd size class cannot be estimated.

3/ Average change for all ranches as measured from licensed forage levels in 1977. Maximum gain and loss have not been determined.

Table 3-16 Permittees with Losses in Excess of 10 and 20 Percent ^{1/} of Forage Requirements at Initial Implementation of Alternative Actions ^{2/}

| | | Alt. 2 | Alt. 3 | Alt. 4 | | Alt. 5 |
|---------------------------------|------------------------|----------------------------|-------------------------|--------------------------------------|-------------------------------------|----------------------------|
| <u>Herd Size</u> | <u>Proposed Action</u> | <u>Eliminate Livestock</u> | <u>Limit Adjustment</u> | <u>Optimize Livestock Short Term</u> | <u>Optimize Livestock Long Term</u> | <u>Optimize Other Uses</u> |
| BAKER DISTRICT PORTION | | | | | | |
| Under 100 | 3(0) | 25(8) | 0(0) | 0(0) | 0(0) | 7(2) |
| 100---399 | 8(2) | 26(15) | 0(0) | 3(0) | 1(0) | 14(6) |
| 400---999 | 3(0) | 15(6) | 0(0) | 1(0) | 0(0) | 5(0) |
| 1,000 or more | <u>0(0)</u> | <u>1(0)</u> | <u>0(0)</u> | <u>0(0)</u> | <u>0(0)</u> | <u>0(0)</u> |
| Total | 14(2) | 67(29) | 0(0) | 4(0) | 1(0) | 26(8) |
| VALE DISTRICT PORTION <u>3/</u> | | | | | | |
| Under 100 | 7(1) | 15(11) | 3(1) | 6(1) | 2(1) | 11(5) |
| 100---399 | 10(4) | 29(22) | 0(0) | 9(0) | 4(0) | 20(7) |
| 400---999 | 7(4) | 14(9) | 3(0) | 6(2) | 1(0) | 8(7) |
| 1,000 or more | <u>1(0)</u> | <u>5(5)</u> | <u>0(0)</u> | <u>1(0)</u> | <u>0(0)</u> | <u>3(1)</u> |
| Total | 25(9) | 63(47) | 6(1) | 22(3) | 7(1) | 43(20) |
| EIS AREA | | | | | | |
| Under 100 | 11(1) | 40(19) | 3(1) | 6(1) | 2(1) | 18(7) |
| 100---399 | 18(6) | 55(37) | 0(0) | 12(0) | 5(0) | 34(13) |
| 400---999 | 10(4) | 29(15) | 3(0) | 7(2) | 1(0) | 13(7) |
| 1,000 or more | <u>1(0)</u> | <u>6(5)</u> | <u>0(0)</u> | <u>1(0)</u> | <u>0(0)</u> | <u>4(1)</u> |
| Total | 39(11) | 130(76) | 6(1) | 26(3) | 8(1) | 69(28) |

^{1/} Number with losses of 20 percent or more in parentheses.

^{2/} Data on Alternative 1 are not available.

^{3/} Considered from the 1977 base, the number of permittees in Vale District with losses in excess of 10 percent of forage requirements would be: proposed action, 34; eliminate livestock, 63; limit adjustment, 28; optimize livestock in short term, 31; optimize livestock in long term, 18; and optimize other uses, 48. The number with losses exceeding 20 percent of requirements has not been determined.

The number of permittees losing 10 percent or more of their annual forage requirements under the various alternatives would range from 6 to 130. Those losing more than 20 percent of their annual requirements would range from 1 to 76. At initial implementation of the proposed action, a reduction in forage from public lands of 10 percent or more of their total forage requirements would occur for 39 permittees who hold 32 percent of the currently authorized AUMs. Eleven of these would lose more than 20 percent of their annual requirements. These permittees, as a group, would suffer 58 percent of the short-term net reduction of AUMs.

In the long term, under the proposed action and Alternative 3, licensed forage would be increased over the existing amount by one-tenth of 1 percent of current forage requirements. Under Alternative 4, the increase over existing amounts would be 7 percent. Some permittees would experience permanent reductions of their grazing privileges under any of the alternatives.

Effect on Ranch Sales Values

At a market price of \$65 per AUM (the highest value based on actual transactions presented in Chapter 2), any reduction of public grazing privileges included in an appraisal or sale of a base property would reduce the total asset value by an equal (or lesser) amount. Reductions which were considered only temporary might affect real estate values to a lesser degree.

The reduction in ranch valuation in Baker and Malheur Counties attributable to the proposed action might initially be as high as \$2.3 million (35,098 AUMs at \$65/AUM). The loss would be recovered over time as licensed forage increased, but individual ranches might have permanently lowered value, and individuals who sold during a period of temporary grazing reduction might suffer some loss. Ranches with increased grazing privileges would have increased value.

The effect of changes in grazing privileges on real estate values under alternative actions when valued at \$65 per AUM would range from an overall loss of \$4.3 million for Alternative 5 to a gain of \$1.7 million for the long-term results of Alternative 4.

Effect on Ranch Operations and Income

Adjustment of ranch operation in response to a reduction in permitted grazing could take several forms. One method of adjustment would be to cut the herd in proportion to the change in annual forage requirements. This method assumes that part of the remaining forage can be utilized to fill the gap in requirements during the grazing season. Herd reductions to accommodate reductions in grazing on public land create forage surpluses in the off-season which can be used to offset the public season loss (Obermiller 1980).

A second method might be to purchase hay or grain to maintain the same herd size. According to the ranch budget data (Appendix L) the loss in "return above cash cost" (See Chapter 2) using this means of adjustment would be approximately twice as much as would be lost by reducing herds in proportion to annual forage requirements.

A third method would be to purchase or lease additional pasture. The average March 1978 commercial value of an AUM was \$5.80 (USDA, Economics, Statistics and Cooperatives Service, July 1979). Since the demand for forage exceeds supply during critical growing periods, the option of purchasing or leasing pasture is currently neither widely available nor generally feasible.

For most ranchers whose forage loss was less than 10 percent of their annual requirements, a herd reduction proportional to the loss in annual requirements would be the most likely response to a forage loss.

The losses (or gains) in return above cash costs under the proposed action and each alternative action for the average rancher in each herd size class in the EIS area are shown in Table 3-17. Changes in "return above cash costs" are considered appropriate here to represent changes in the average rancher's net income because only minor changes in production level and methods would occur.

The table shows that over the short-term, ranchers in the Baker District portion would have an average loss of about \$530 annually in return above cash cost or net income under the proposed action. Average change in return above cash cost for the alternative actions would range from a loss of \$2,400 if no BLM grazing were permitted to a gain of \$380 over the long term if livestock grazing were optimized. The amount of loss (or gain) would vary for different herd size classes. Ranchers with herds of 1,000 or more cows would have the largest changes in most cases.

Similarly, Vale District ranchers in the EIS area would have an average loss of \$1,510 per ranch for the short-term under the proposed action. Losses (or gains) for each of the other alternatives are also shown.

In addition to these income losses, some ranchers would have their borrowing capacity reduced by their loss of grazing privileges. Since borrowing capacity is based on the overall carrying capacity of the ranch (Biggers 1980), the effect on borrowing capacity would depend on the lenders judgment concerning how the ranch carrying capacity was affected.

Ranchers with forage losses exceeding 10 percent of their annual requirements (Table 3-16) would probably realize economic losses proportionally greater than their forage losses. Assuming that a herd reduction equal to the change in annual forage requirements would satisfy seasonal needs, the effect on average cost would be influenced by the change in the size of the operation. The costs of making a seasonal redistribution of forage would be higher. Average costs would be higher also because the fixed costs (land, equipment etc.) would be distributed over fewer animals. Income would be more than proportionally reduced, and a loss might be incurred.

Table 3-17 Effect on Return Above Cash Costs of Alternative Actions
(Average return per ranch, 1977-79 average prices)

| <u>Herd Size</u> | <u>Existing Level</u> | <u>Proposed Action</u> | <u>No BLM Grazing</u> | <u>Limited Adjustment</u> | <u>Optimize Livestock</u> | | <u>Optimize Other Uses</u> |
|--------------------------------|---------------------------|----------------------------|---------------------------|-------------------------------|---------------------------|-------------|--------------------------------|
| | | | | | <u>Short</u> | <u>Long</u> | |
| | | BAKER | DISTRICT | PORTION | | | |
| Under 100 | \$ 5,000 | \$ -70 | \$ -590 | \$ -30 | \$ 0 | \$ 160 | \$ -220 |
| 100---399 | 19,000 | -610 | -2,400 | -290 | -370 | 280 | -1,100 |
| 400---999 | 60,000 | -980 | -4,900 | -330 | 0 | 570 | -2,100 |
| 1,000 or more | 140,000 | +530 | -4,500 | +550 | +710 | 2,500 | -570 |
| All Sizes | 29,000 | -530 | -2,400 | -210 | -150 | 380 | -1,100 |
| | | VALE | DISTRICT | PORTION | | | |
| Under 100 | \$ 6,200 | \$ -170 | \$ -1,500 | \$ -70 | \$ -50 | \$ 460 | \$ -630 |
| 100---399 | 20,000 | -840 | -5,000 | -410 | -410 | 500 | -1,700 |
| 400---999 | 83,000 | -3,000 | -19,000 | -1,300 | -1,890 | 1,040 | -5,400 |
| 1,000 or more | 147,000 | -3,800 | -20,000 | -2,000 | -2,600 | 2,700 | -7,100 |
| All Sizes | 44,800 | -1,510 | -9,050 | -720 | -900 | 890 | -2,900 |
| All Sizes (1977) ^{1/} | | - 3,800 | -10,400 | -2,600 | -3,100 | -150 | -5,900 |

^{1/} Changes from 1977 levels of BLM forage. See text.

Borrowing capacity would be affected in proportion to the change in overall carrying capacity of the ranch. For ranchers with existing debt, the effect on any remaining additional debt capacity would be multiplied. Some ranchers might not be able to borrow additional funds. Ranchers who sold their properties would receive a sales value reduced by the de facto value of the grazing privileges lost, however, they might obtain the value of any prospective increase in grazing privileges in offset to the reduction.

Effect of Forage Reductions on Local Income

Ranchers' adjustments to forage losses would reduce the income of others in the community as well as their own. Livestock production and sales would be reduced resulting in reduced purchases from others for related goods and services. The end result would be a cumulative loss estimated at \$2.35 of local gross income and 51 cents of local personal income for every dollar change in beef sales by ranchers dependent on public grazing (Obermiller and Miller 1980). Using the ranch budget data contained in Appendix L, changes in the value of beef sales were estimated for each county and converted to county income estimates by using these factors.

The effect on the annual gross income of ranchers and on all local business for each alternative is estimated as follows:

| Alternative | <u>Baker County</u> | | <u>Malheur County</u> | |
|---------------------|---------------------|-----------------------|-----------------------|-----------------------|
| | <u>Ranchers</u> | <u>All Industries</u> | <u>Ranchers</u> | <u>All Industries</u> |
| Proposed Action: | | | | |
| Short Term | \$-190,000 | \$ -456,000 | \$ -506,000 | \$-1,210,000 |
| Long Term | - 61,000 | -143,000 | + 96,000 | + 225,000 |
| No livestock use | -911,000 | -2,180,000 | -1,880,000 | -4,510,000 |
| Limited adjustment | -76,000 | -182,000 | -251,000 | -602,000 |
| Optimize livestock: | | | | |
| Short Term | -57,000 | -137,000 | -364,000 | -873,000 |
| Long Term | +131,000 | +313,000 | +257,000 | +615,000 |
| Opt. other uses | -397,000 | -950,000 | -935,000 | -2,240,000 |

The estimated changes in county income resulting from ranch production adjustments are shown in Table 3-18 for Baker County, Malheur County, and the two counties combined. The table includes the estimated income changes in Malheur County which would occur as measured from a 1977 base in Vale District.

Effect on Ranching Sector Income

Table 3-19 presents the effect of existing grazing (total and public) upon personal income of all BLM permittees and their employees.

Table 3-18 Change in Local Personal Income from Grazing
at Initial Implementation of Alternative Actions 1/
(Thousands of 1977-79 dollars)

| <u>Condition or Action</u> | <u>Baker County</u> | <u>Malheur County 2/</u> | <u>Both Counties</u> |
|--|-------------------------|------------------------------|--------------------------|
| <u>Existing Condition:</u> | | | |
| Total for BLM permittees <u>3/</u> | \$5,150 | \$4,750 (4,750) | \$9,900 |
| Total for BLM share of forage <u>4/</u> | 468 | 967 (1,100) | 1,435 |
| <u>Change due to alternative action:</u> | | | |
| Proposed action: | | | |
| Short term | -98 | -260 (-400) | -358 |
| Long term | -30 | +47 (-96) | +17 |
| Limited adjustment | -39 | -129 (-270) | -168 |
| Optimize livestock: | | | |
| Short term | -29 | -187 (-330) | -216 |
| Long term | +67 | +132 (-10) | +199 |
| Optimize other uses: | -204 | -481 (-620) | -685 |

- 1/ Estimates of county personal income (and changes) in this table are based on the total sales estimates contained in the ranch budgets. Sales totals were multiplied by the direct and indirect coefficient of payments per dollar of export sales to household by the "Dependent Ranching" sector in the input-output study for Grant County (Obermiller and Lester 1980).
- 2/ Amounts shown in parentheses in this column reflect conditions prior to the adjustments in active grazing permits made in Vale District in early 1978.
- 3/ Represents total personal income (including that of the ranchers) generated in the county by the economic activity (sales and purchases) of ranchers holding BLM grazing permits.
- 4/ Represents the portion of county income attributable to BLM forage based on its portion of total forage requirements for BLM permittees.

Table 3-19 Change in Direct Personal Income of the Ranch Sector
from Grazing at Initial Implementation of Alternative Actions 1/
(Thousands of 1977-79 dollars)

| <u>Condition or Action</u> | <u>Baker County</u> | <u>Malheur County</u> | <u>Both Counties</u> |
|--|-------------------------|----------------------------|--------------------------|
| <u>Existing Condition:</u> | | | |
| Total for BLM permittees <u>3/</u> | 3,100 | 3,000 <u>2/</u> (3,000) | 6,100 |
| Total for BLM share of forage <u>4/</u> | 282 | 585 (664) | 867 |
| <u>Change due to alternative action:</u> | | | |
| Preferred action: | | | |
| Short term | -59 | -157 (-241) | -216 |
| Long term | -18 | +28 (-58) | +10 |
| Limited adjustment | -24 | -78 (-163) | -102 |
| Optimize livestock: | | | |
| Short term | -18 | -113 (-199) | -131 |
| Long term | +41 | +80 (-6) | +121 |
| Optimize other uses: | -123 | -290 (-374) | -413 |

- 1/ Estimates of direct personal income in the ranching sector (and changes) in this table are based on the total sales estimates contained in the ranch budgets. Sales totals were multiplied by the direct requirements coefficient of payments per dollar of export sales to households by the "Dependent Ranching" sector in the input-output study for Grant County (Obermiller and Lester 1980).
- 2/ Numbers in parentheses reflect conditions prior to the adjustments in active grazing permits made in Vale District in early 1978. All other columns reflect present conditions.
- 3/ Represents direct personal income of ranchers and employees generated in the county by the economic activity (sales and purchases) of ranchers holding BLM grazing permits.
- 4/ Represents the portion of income of the ranching sector attributable to BLM forage based on its portion of total forage requirements for BLM permittees.

Other Effects

Table 3-20 shows the impacts on the construction industry resulting from the alternative actions. The value of construction was estimated on the basis of 1976 unit values of improvements shown in Table 3-14 (energy use). The impacts shown represent amounts accumulated over a several year period assumed to be 5 years.

Table 3-20 Impacts of Construction on Local Personal Income and Employment

| <u>Alternative</u> | <u>Value of Construction (1976 prices)</u> | <u>Personal Income (1978 prices)</u> | <u>Employment (work years)</u> |
|------------------------------------|--|--|------------------------------------|
| Proposed action | \$2,024,000 | \$1,400,000 | 140 |
| Alternative 1. No action | none | none | none |
| Alternative 2. Eliminate livestock | none | none | none |
| Alternative 3. Limit adjustment | 2,024,000 | 1,400,000 | 140 |
| Alternative 4. Optimize livestock | 3,439,000 | 2,300,000 | 237 |
| Alternative 5. Optimize other | 1,295,000 | 860,000 | 89 |

Community economic impacts stemming from changes in hunting and fishing recreation are expressed as changes in local personal income and jobs created by the local expenditures of recreationists.

These impacts were estimated using the differences in visits (Table 3-12) expected from changes in BLM management. The Baker and Northern Malheur Planning Area Analyses were consulted for estimates of expenditures per day by each type of activity, and for the mix of species hunted within the categories "Big Game" and "Upland Game". These expenditure estimates were adjusted to 1978 price levels using the Portland Consumer Price Index (CPI-W). To estimate the effect on local personal income, the distribution of hunter expenditures presented in The Oregon Big Game Resource: An Economic Evaluation (Brown, Nawas and Stevens 1973, Table 25) was used with the 1977 input/output table for Grant County (Obermiller and Miller 1980, draft).

Personal income generated locally by hunters expenditures in Grant County were found to amount to about 35 percent of expenditures. This ratio was used to estimate personal income. The number of jobs gained or lost was estimated by dividing the income estimate by the average annual wage in 1978 (\$9,676).

As discussed in the recreation section, recreation on public lands is expected to increase in the absence of any BLM action. The impacts as shown in Table 3-21 are measured as the difference in 1990 between the income and employment generated by recreation under the conditions created by the alternative action and the amounts generated without any BLM action. These differences are considered representative of the annual long-term impacts of the action.

Table 3-21 Impacts of Hunting and Fishing on Public Lands
on Local Personal Income and Employment ^{1/}
(1990 conditions, 1978 price levels)

| <u>Alternative</u> | <u>Difference in Annual Personal Income ^{2/}</u> | <u>Difference in Employment ^{2/}</u> |
|------------------------------------|---|---|
| Proposed action | \$ 3,000 | 0 |
| Alternative 1. No action | 0 | 0 |
| Alternative 2. Eliminate livestock | 39,000 | 4 |
| Alternative 3. Limit adjustment | 3,000 | 0 |
| Alternative 4. Optimize livestock | -125,000 | - 13 |
| Alternative 5. Optimize other | 17,000 | 2 |

- 1/ Impacts are measured as the difference between "with" and "without" conditions in 1990; that is, the difference between conditions expected to result from the alternative action and those expected if no action were taken.
- 2/ In the absence of any change in BLM management (no action alternative), wildlife-related recreation in the EIS area is expected to generate \$5 million in local personal income in 1990 (1978 prices) and 512 jobs.

Summary of Economic Impacts

Permittees having losses in excess of 10 percent of their annual forage requirements would probably experience major business adjustments. Those having long-term reductions of such magnitude would suffer serious permanent losses. The number having losses of more than 10 percent of grazing requirements are:

| <u>Alternative</u> | <u>Short term</u> | <u>Long term</u> |
|------------------------------------|-------------------|------------------|
| Proposed action | 39 | Unknown |
| Alternative 1. No action | Unknown | Unknown |
| Alternative 2. Eliminate livestock | 130 | 130 |
| Alternative 3. Limit adjustment | 6 | Unknown |
| Alternative 4. Optimize livestock | 26 | 8 |
| Alternative 5. Optimize other | 69 | Unknown |

The impacts of alternative actions on local personal income and employment are summarized in Tables 3-22 and 3- 23.

Table 3-22 Local Personal Income Related to Livestock Grazing, Range Improvements and Hunting and Fishing
(Short-term/long-term changes in thousands of 1977-79 dollars)

| | Existing Situation | 1/ Proposed Action | Change in Local Personal Income from Public Land Resources | | | | |
|--------------------------------------|-----------------------|--------------------------|--|----------------------------------|---------------------------------|---------------------------------|------------------------------|
| | | | Alt. 1 No Action | Alt. 2 Eliminate Livestock | Alt. 3 Limited Adjustment | Alt. 4 Optimize Livestock | Alt. 5 Optimize Others |
| Total | 36,100 | -78/+20 | 0/Unk. | -1,435/-1,396 | +112/+20 | +244/+74 | -513/-668 |
| Livestock grazing EIS Area | 23,500 | -358/+17 | 0/Unk. | -1,435/-1,435 | -168/+17 | -216/+199 | -685/-685 |
| Baker | 7,500 | -98/-30 | 0/Unk. | -468/-468 | -39/-30 | -29/+67 | -204/-204 |
| Vale | 16,000 | -260/+47 | 0/Unk. | -967/-967 | -129/+47 | -187/+132 | -481/-481 |
| Range Improvement Construction 2/ | 7,600 | +280/0 | 0/0 | 0/0 | +280/0 | +460/0 | +172/0 |
| Hunting & Fishing | 5,000 | 0/+3 | 0/0 | 0/+39 | 0/+3 | 0/-125 | 0/+17 |

1/ Total direct and indirect local personal income for Baker and Malheur Counties attributable to all sources of livestock grazing, contract construction, and hunting and fishing.

2/ Total personal income from construction is assumed to occur over a 5-year period.

Table 3-23 Local Employment Related to Livestock Grazing, Range Improvements, and Hunting and Fishing
(Short term/long term changes in terms of full time equivalent jobs)

| | <u>Existing Situation</u> | <u>Proposed Action</u> | <u>Alt. 1 No Action</u> | <u>Alt. 2 Eliminate Livestock</u> | <u>Alt. 3 Limited Adjustment</u> | <u>Alt. 4 Optimize Livestock</u> | <u>Alt. 5 Optimize Other</u> |
|------------------------|-------------------------------|----------------------------|---------------------------------|---|--|--|--------------------------------------|
| Total | N/A | -8/+2 | 0/Unk. | -148/-144 | +12/+2 | +27/+8 | -53/-69 |
| Livestock Grazing | | | | | | | |
| EIS Area | 2,429 | -37/+2 | 0/Unk. | -148/-148 | -17/+2 | -22/+21 | -71/-71 |
| Baker | 775 | -10/-3 | 0/Unk | -48/-48 | -4/-3 | -3/+7 | -21/-21 |
| Vale | 1,654 | -27/+5 | 0/Unk. | -100/-100 | -13/+5 | -19/+14 | -50/-50 |
| Range Improvement | | | | | | | |
| Construction <u>1/</u> | N/A | +29/0 | 0/0 | 0/0 | +29/0 | +49/0 | +18/0 |
| Hunting & Fishing | 512 | 0/0 | 0/0 | 0/+4 | 0/0 | 0/-13 | 0/+2 |

1/ Total employment is assumed to occur over a 5-year period.

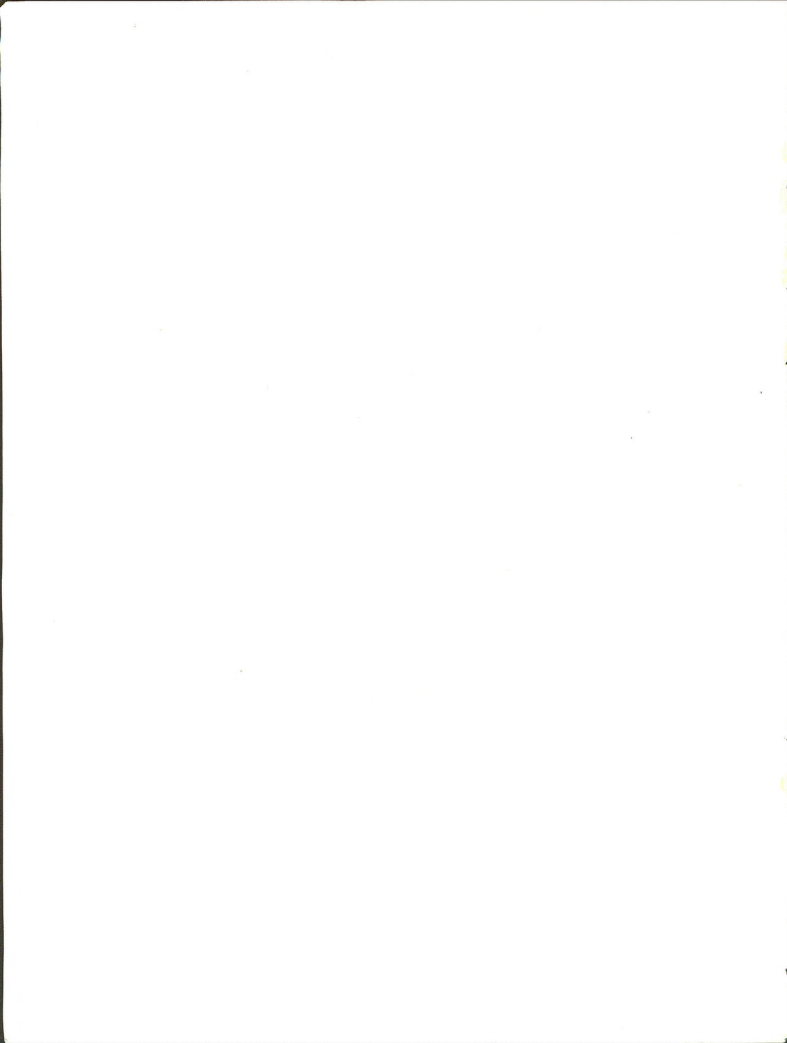
LIST OF PREPARERS

While individuals have primary responsibility for preparing sections of an EIS, the document is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation. Specialists at the District, State Office and Washington Office levels of the Bureau both review the analysis and supply information. Contributions by individual preparers may be subject to revision by other BLM specialists and by management during the internal review process.

| <u>Name</u> | <u>Primary Responsibility</u> | <u>Discipline</u> | <u>Related Professional Experience</u> |
|---------------------|---|--------------------------------------|--|
| Lisa Blackburn | Climate, Air Quality, Soils Water Resources, Geology, Topography and Wild Horses | Range Management/ Soil Science | 1 year, (Range Conservationist) USFS 1-1/2 years (Soil Scientist) BLM, Burns, Oreg.; 2-1/2 years (Environmental Protection Specialist) BLM, Portland, Oreg. |
| John T. Booth | Socioeconomics | Economics | 22 years (Economist) 2-1/2 years (Regional Economist) BLM 7-1/2 years (Regional Economist) Corps of Engineers 2-1/2 years (Economist) Federal Reserve Bank of San Francisco 6-1/2 years (Economic Analyst) Wash. Dept. of Commerce 3 years (Tax Analyst) Wash. Tax Commission |
| Stanley G. Detering | Economics | Agricultural & Regional Economics | 17 years (Economist) 7 years (Regional Economist) BLM 6 years (Lecturer, Assistant Professor, Research Associate) 4 years (Research Assistant) |
| Gerry Fullerton | Team Leader | Range Conservation | 18 years, BLM (Range Conservationist Natural Resource Specialist, Environmental Specialist) |
| L.D. Hamilton | Technical Coordinator/Editor | Geography | 10 years, (Outdoor Recreation Planner, Environmental Protection Specialist) |
| Jeanne Johnson | Editorial Assistant | Administrative Secretary | 4 years, BLM (Secretary, Editorial Assistant) |
| Richard Nawa | Wildlife | Zoology | 6 years (Wildlife Biologist) 2 years BLM, Elko, Nev.; 2 years BLM, Portland, Oreg.; 2 years Cooperative Wildlife Research Lab., Southern Illinois Univ. |
| Joseph Ross | Recreation, Cultural Resources, Wilderness, Ecologically Significant Areas, Visual Resources and Energy. | Recreation | 5 years (Forestry Technician, Biological Information Specialist, Outdoor Recreation Planner) |
| Vern Schulze | Vegetation | Range Management | 15 years BLM (Range Conservationist) 2 years Prineville, Oreg.; 7 years Baker, Oreg.; 2 years Winnemucca, Nev.; 2 years Salt Lake City, Utah; 2 years Portland, Oreg. |
| Ron Smith | Team Manager | Forest Management | 22 years BLM (Forester, Outdoor Recreation Planner, Supervisory Environmental Protection Specialist) |

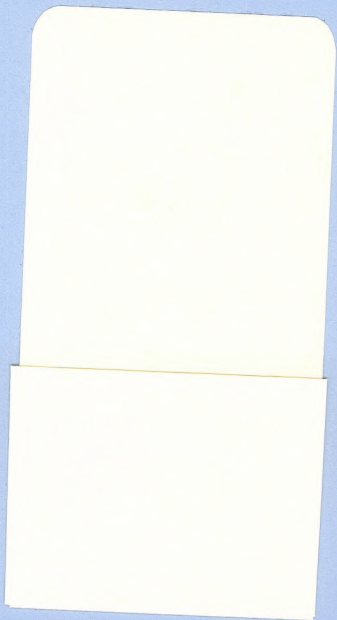
ADDITIONAL REFERENCES CITED

- Biggers, Spike
1980. Manager, Baker Production Credit Association, Baker, Oreg.
Personal communication, August 1, 1980
- Bromley, D.W., G.E. Blanch and H.H. Stoevener
1968. Effects of Selected Changes in Federal Land on a Rural Economy.
Station Bulletin 604, Oregon State University, Agricultural Experiment
Station, Corvallis, Oreg.
- Brown, William G., Farid H. Dawes and Joe B. Stevens
1973. The Oregon Big Game Resource: An Economic Evaluation. Special
Report 379, Oregon State University, Agricultural Experiment Station,
Corvallis, Oreg.
- U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic
Analysis Division.
1980. Regional Economic Information System. Washington, D.C.
- U.S. Department of the Interior, Bureau of Land Management
1980. Owyhee Grazing Environmental Impact Statement. Draft and Final.
Boise District Office, Boise, Idaho.
1980. Official Report of Proceedings, Public Hearing Re: Ironside
Environmental Impact Statement. June 4, 1980, Baker, Oreg.



BUREAU OF LAND MANAGEMENT

Library
Denver Service Center



Form 1842
(January 1978)

POSTAGE AND FEES PAID
DEPARTMENT OF THE INTERIOR
INT 415



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
P.O. Box 2965 97209 NE
Portland, OR 97208
Return if not delivered in 10 days
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

(1)

U.S. Department of the Interior
Bureau of Land Management
Denver Service Center Library
Building 50
Denver, CO 80225